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NATURAL HISTORY,

PATHOLOGY, AND TREATMENT

OF THE

EPIDEMIC FEVER,

AT PRESENT PREVAILING IN

EDINBURGH AND OTHER TOWNS:

Illustrated by Cases and Dissections.

BY

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"I know that the truth is in the facts, and not in the mind which observes them."—Rousseau.

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TO

JOHN ABERCROMBIE, M.D. Edin. & Oxon.

VICE-PRESIDENT OF THE ROYAL SOCIETY OF EDINBURGH,

PHYSICIAN TO THE QUEEN,

&c. &c. &c.

This Memoir

IS RESPECTFULLY DEDICATED

IN SINCERE TESTIMONY OF ADMIRATION OF HIM

AS A MAN AND A PHYSICIAN,

BY

THE AUTHOR.

PREFACE.

CIRCUMSTANCES, which it is not necessary to explain, render it proper to delay the publication of the Appendix. It will probably not appear till the close of the epidemic.

The author cannot allow this Memoir to go forth to the world, without publicly and heartily thanking his accomplished friends Dr Heude and Mr. J. W. Reid for the efficient assistance which they rendered to him when Physician to the New Fever Hospital.

131 PRINCES STREET,
Dec. 20, 1843.

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INTRODUCTION.

Immediately, on commencing the duties of Physician to the New Fever Hospital, I began to report minutely, almost every case committed to my charge; and from that time, till now, have rigorously followed the same plan, daily devoting a large portion of time, to observing and recording the features of the prevailing epidemic, both, when interfered with by medicines, and when allowed to run its natural course. The leisure of autumn being now past, and other professional occupations rendering it imperative upon me, to devote much less time than heretofore, to Hospital studies, I venture to publish these observations now; fearing, that by delay, I would not amass much more information, and be only able to accumulate imperfect cases. It is hoped, however, that the present notes will not be considered unseasonable or premature, as in the practice of the large Hospital, I have already simultaneously watched and contrasted with each other, manifold instances of every variety of the disease.

The main object, in what follows, is to present a faithful account of the Natural History and Pathology of the prevailing epidemic, along with such details of the Treatment followed, as appear to be of practical importance. Every fact stated, is put forth, almost in the very words in which it was noted down at the moment of observation,—a practice, which ought to be considered imperative on all, who venture to lay the result of their experience before the profession. It cannot be denied, that great hindrance has accrued to the improvement of the Science of Medicine, from physicians describing the phenomena of disease, and the supposed effects of remedies, from general impressions remaining in their minds, after the lapse of hours, days, weeks,

or even longer intervals,—in place of founding their statements upon an analysis of facts committed to paper, at the very time that they were being observed, at the bedside of the living patient, or at the dissection of the dead. Neglect of this somewhat irksome, but only safe system of recording Medical experience, has proved one of the most fruitful sources of discrepancy among us, regarding the Natural History of diseases, and the selection of therapeutic agents for their treatment. It is in consequence of such laxity, as often as from dishonesty, that facts are changed, in order to harmonize with theories. "When the mind," says Bacon, "is once pleased with certain things, it draws all others to consent and go along with them; and though the power and number of instances that make for the contrary are greater, yet, it either attends not to them, or despises them; or else, removes and rejects by a distinction, with a strong and pernicious prejudice, to maintain the authority of its first choice inviolate."

It is proposed, in the following paper, first, to describe the disease in its ordinary form, drawing the description from cases, little, if at all, influenced by therapeutic agents. The severer and more unusual varieties of the fever will then be considered, by which we will be introduced to important details illustrating the next topic—its Pathology. The memoir will also embrace statistical details, and practical considerations.

CHAPTER I.

ORDINARY, OR MODERATELY CONGESTIVE FORM OF THE DISEASE.

In ordinary cases, the countenance of the patient has a peculiar appearance, which we may designate *bronzed*, for want of a better term. Though no words can accurately convey what is thus attempted to be described, the appearance itself is very characteristic, and has never failed to arrest and interest the medical visitors to the hospital, to whom it has been pointed out.

The symptoms of invasion are in all cases remarkably similar, both as to their nature, and order of occurrence.

The patient is first seized with coldness, rigors, headache, pain in the back, and more or less prostration of strength; but the latter symptom, it must be remarked, is often not at all urgent, many walking long distances from the country to the hospital, especially during the first days of the disease; and a still greater number of the destitute town patients lounge about the streets after their seizure, and come in to us on their legs.

After a period, varying from less than half an hour to several hours, the cold fit terminates, when the severity of the headache greatly increases, and a dry burning heat comes over the whole body, accompanied by much thirst and general uneasiness.

The hot stage is succeeded by a sweat, usually very profuse, continuing for a number of hours, and seldom attended or followed by any relief to the headache or other pains.

Sometimes, though rarely, there is no sweating for two or three days after the seizure. Occasionally also, there is no well-marked hot stage between the cold and the sweating fits; and in at least a few cases, the sweat breaks out on the face and upper part of the body, whilst the patient is yet in his initiatory rigors.

It is proper to remark, that during the whole course of the disorder, the perspiration has a characteristic disagreeable smell,

and is decidedly acid, as is proved by its reddening litmus paper, and that sometimes with intensity.

During the three stages of the initiatory paroxysm, the pulse is rapid, being sometimes as high as 150, seldom below 90, and commonly ranging between 90 and 120. During the rigors, in several cases, I have found it very wiry and tremulous; in the hot stage, it is often hard, and not very easily compressed; at the sweating period, it becomes fuller and softer, and does not exhibit that deficiency in strength, shown after, and during the perspirations of a more advanced period of the fever.

For the first 48 hours, the tongue commonly continues moist, exhibiting at the same time a white or brownish yellow fur, excepting at the point, where there is usually a clear space, extending over a space, often, (as in *typhus abdominalis*,) shaped like a triangle, the extremity of the tongue forming the base. Afterwards, the tongue becomes dry, and longitudinally streaked on the centre with brown, in which state it continues till the approach or arrival of the crisis, at from the third to the ninth, but in the majority of cases, on the fifth day.

During the first four days, some of the patients have occasional short rigors; but most commonly, they are in a state of dry ardent fever, with occasional sweatings. These sweatings occur, or at all events, commence in most cases, between two and nine A.M.; but to this rule, there are many exceptions. In a considerable proportion, even of the ordinary and mild cases, nausea and vomiting usher in and attend the sufferings of the first days. Pain at the scrobiculus cordis generally accompanies these symptoms; not unfrequently, it is present without them. A symptom which uniformly occurs during the first four days, is severe muscular and articular pain. General uneasiness, or pain in the abdomen, (but particularly above the pubes, and over the liver and spleen, when pressure is made on these regions,) are very commonly, but by no means uniformly met with.

So long as the patients suffer much from the symptoms now described, they sleep badly, and frequently not at all, unless opiates are administered. The severe pains in the joints and muscles are often sufficient to account for the bad nights complained of; but even with those who do not suffer much from this cause, sleeplessness is a distressing symptom up to the crisis.

A remission on the third day is very common. It occurred in all the cases, which I have had an opportunity of attentively observing from the invasion onwards.

On, or about the fifth day, there is an evident manifestation of the violence of the disorder being expended; and this change for the better is often very sudden and complete. One day, we hear the patient moaning and groaning in pain; and on the next, he is at ease and cheerful, his only complaints being of hunger and weakness. This state is generally ushered in by a copious sweat; or by epistaxis or diarrhœa. The sweating was by far the most common critical evacuation till the beginning of October, when diarrhœa and dysentery, formerly rare occurrences, became common; and at the present time (October 30) they are as usual as sweating. After this change, the pulse, tongue, and skin are quite natural; and the facial bronzing often becomes much less striking. For several days, or till about the fourteenth or fifteenth day of the disease, there is a period of intermission, during which a great deal of lost strength is regained, and a steady improvement goes on in all respects.

On, or about the fourteenth or fifteenth day from the beginning of the disease, the patient relapses; or, in other words, has a paroxysm of fever, similar to that which began his first attack. The relapse takes place late or early, just according to the date of the first convalescence, as will be clearly seen from all the cases to be detailed. It sometimes happens, that the onset and progress of the second attack is attended by severer, and at other times, by milder symptoms than those of the first. In the relapse, the abortions most commonly take place.[1] In it also, the muscular and articular pains are very often most severe. Cases, which in the first attack were strictly mild and ordinary, have in the second, become signalized by jaundice, delirium, diarrhœa, dysentery, and other grave symptoms. Such occurrences are, however, not common.

A large number of patients have a second and generally mild relapse, on or about the 21st day. As these relapses take place

[1] In one or other of the attacks, pregnant women almost invariably miscarry. My assistant Mr J. W. Reid attended a Dispensary patient who did not miscarry, till a *second relapse* about the 21st day.

often after dismissal from the Hospital, it was some time before I discovered the frequency of third attacks.

In those who are young and of good constitution, the convalescence is rapid and complete. In the old and debilitated, it is otherwise; but I have never seen any one, old or young, die of the ordinary form of the fever.

The above is a succinct account of the course of the disease in its most common form.

Some cases are subjoined, which, I beg the reader to remark, are given, not so much as illustrations of the treatment, as of the natural history of the fever.

Case I.—Summary—*First attack—Intermission—Relapse on the 16th day. Treatment; cold to the head and aperients.*

Thomas Thomson, a native of Kilmarnock in Ayrshire, aged 23, single, by trade a shoemaker, with fair complexion, blue eyes, good development, and plump healthy appearance, was

Admitted on 16th September 1843, (*seventh day.*) He states, that he was never in Edinburgh till two days ago, when he arrived from London, after an ineffectual search for employment. During the two days of his sojourn here, he has, during both day and night, been lounging about the streets, or lying in common stairs. Fortunately, the weather has been warm. He states, that he never had an illness before the present; and was only once drunk in his lifetime. His appearance indicates sobriety, and a good constitution.

He was seized with rigors and headache, on the 10th; and from that time till admission, suffered considerably from the latter, and at intervals, from the former. He has had only one slight sweat, which occurred on the 8th, being the fifth day inclusive, from the seizure; and on that day, as well as on another occasion, (the date of which cannot be accurately ascertained), he had slight attacks of epistaxis. He has taken no medicine, nor had any kind of medical treatment.

The pulse is 120, full, and of good strength; the tongue is much furred, and moist; the bowels have not been opened since the commencement of his illness; there is no eruption of any description on the skin; the muscular power seems to be very

much enfeebled; the intellect is clear, and the senses and sensations are quite natural. He states, that during the last two nights he slept none; but before that, he passed tolerable nights, though then suffering more than latterly from headache and general pains. The latter are now very slight, but the headache still continues severe. He has no appetite; he has no cough; the respirations are 16 in the minute; and the chest, which is broad and well formed, expands freely. The diaphragm descends easily, and without exciting any unpleasant feelings. He has never had nausea, and at present has no epigastric pain; but he suffered a good deal from this cause before admission. There is no increased dullness or fullness in the region of the liver. His countenance indicates excitement; it is flushed with a deep red, tending to purple, and does not exhibit much of the bronzing.—*Abradatur capilitium, et applicetur aqua frigida toto capiti.—Habeat statim enema purgans; et vespere, sumat olei ricini,* ℥iss.

18*th September*, (*ninth day.*)—Some hours after the application of the cold cloths, the headache became much less severe; and when reported yesterday at noon, he said, that it had entirely left him. He was freely purged by the enema and the castor oil. The tongue, skin, pulse, and general apect, are natural; and now, his only complaint is of debility.—*Quiescat.*

20*th September*, (*eleventh day.*)—He experienced no change till this morning, when between four and six o'clock he had some rigors. They were not followed by sweating, but by a comfortable and moist state of the skin which exists at present. He again feels as well as yesterday. The tongue is clean; the pulse is 84, and of good strength; the bowels are confined.—*Habeat olei ricini* ℥iss *statim.*

24*th September*, (*fifteenth day.*)—Since last report, he has gone on steadily improving. The bronzing has completely replaced the flushing.

25*th September*, 10 P.M., (*sixteenth day.*)—About eight P.M. he was seized with rigors and headache, followed by a feverish heat. At present, he is shaking and trembling as if with cold, but the sensation communicated by applying the hand to any part of the body is that of burning heat. The pulse is 92.—*Quiescat.*

26*th September*, (*seventeenth day.*)—He slept pretty well during

the night. To-day, he complains very much of headache, and of severe general pains; the bowels are open; the pulse is 96, and of good strength.—*Quiescat.*

27*th September*, (*eighteenth day.*)—He slept little during the night, which he attributed to the severity of the muscular and articular pains. The headache is not much complained of; the bowels were opened, but not freely, this morning, without the aid of medicine; the skin is cool; the tongue is slightly coated, and rather dry; the thirst is excessive.—*Habeat enema purgans vespere.*

28*th September*, (*nineteenth day.*)—The bowels were very freely opened by the purgative enema. The pulse is 106, soft, and very compressible. The tongue is much as it was yesterday.—*Habeat vini rubri* ℥*iv.*

29*th September*, (*twentieth day.*)—During last night, he slept well, and sweated profusely. The countenance wears the same aspect as yesterday. He feels much better, but still complains a little of headache and general pains. The pulse is 88, and of rather better strength than yesterday; the tongue is moist, and slightly blackened, as if smeared with black currant jelly, (an appearance frequently observed in the patients, and especially, though not exclusively, in those who get wine); the bowels are open.—*Quiescat;—et continuatur vinum.*

2*d October*, (*twenty-third day.*)—He is in every respect well, and makes no complaint, except of weakness. This, however, does not exist to any great extent, as just before this report was commenced, he was seen to walk steadily to the water-closet, a distance of about twenty yards, and return to bed, without appearing fatigued in the least degree.—*Omitatur vinum.—To have full diet.*

9*th October*, (*thirtieth day.*)—There has been a steady and rapid improvement in appearance and strength, since last report; and he is now dismissed, strong, and in perfect health. His destitute condition has been the cause of his remaining in the hospital so long after recovery.

CASE II.—SUMMARY.—*First Attack—Remission on the 3d day—Intermission—Relapse (more severe than the first attack) on the 14th day. Treatment; wine and aperients.*

Felix O'Neill, Irish, married, aged 52, a pensioner receiving 1s. 0½d. per diem, residing in the Grassmarket, moderately robust, with light-brown hair, and grey eyes, was

Admitted on 10th August 1843, (*fifth day.*)—He states, that he has never suffered from want of food; and is only occasionally drunk on pension days. Sixteen years ago, he had fever in Queensberry House Hospital, but with this exception, has always enjoyed excellent health. His wife and children are at present suffering from the epidemic. On the floor above his lodging, there occurred several cases, before it appeared in his family.

On the 6th, he was seized with rigors, headach, general pains, prostration of strength, loss of appetite, vomiting, dimness of sight, and vertigo. On the night of his attack, he walked to the Southern Dispensary, where he received an emetic and a purgative. He took the purgative, by which the bowels were freely moved next morning. He slept soundly, and perspired a good deal during the night. After the operation of the purgative, he took the emetic. From the period of seizure, to the present, he has had a continuance of the symptoms of invasion in greater or less intensity, but upon the whole, varying little in degree, except on the 8th, (*third day*), when they experienced a notable remission. He has had no epistaxis.

The pulse is 106, full, and of good strength; the tongue is clean, and upon the whole, moist; there is much thirst; the bowels have been opened by medicine taken this morning; the body is covered with a profusion of small dots of ecchymosis, which may possibly have originated in flea bites; the intellect is clear; there is some headach; he has slept none for the last two nights; the urine is copious, and high coloured; the respirations are 28 in the minute; the diaphragm descends freely; his chief complaints are of debility, general pains, and a disagreeable saline taste in the mouth.—*Quiescat.*

11th August, (*sixth day.*)—It appears from his own account, and from that of the nurse, that he passed a restless, and almost

sleepless night. He complains of great thirst, general uneasiness, and some headach. The pulse is 92, soft, and of tolerable strength; the respirations are as yesterday; he has had several stools since admission.—*Applicetur aqua frigida capiti.* —*Pro potu habeat "imperial."*

12*th August*, (*seventh day.*)—From a mistake on the part of the nurse, he got a dose of castor oil: the bowels have in consequence of this been repeatedly moved. He passed a restless, uncomfortable night, but notwithstanding, feels rather better than yesterday. The pulse is 98, and rather feeble.—*Habeat vini rubri* ℥*vj.*

Vespere. Immediately after the noon visit, he had rigors, which recurred during the evening, and exist to some extent at present.

13*th August*, (*eighth day.*)—He slept well, and has an improved appearance. He has taken six ounces of wine since 4 P.M. yesterday.

14*th August*, (*ninth day.*)—He is going on well, and makes no complaint, except of the general pains. The tongue is cleaning; the bowels are confined.—*Contr. vinum.*—*Ht. statim olei ricini* ℥*iss.*

16*th August*, (*eleventh day.*)—He is going on well. Since the operation of the oil ceased yesterday, he has had no stool. Complaints are made of general pains and debility: the severity of the former has, however, greatly diminished.—R. *pil. hydrargyri, pil. colocynth. comp. massæ āā gr. iiss. Misce, et fiat pil. horâ somni sumenda.—Cras mane, habeat haust. cathartici* ℥*iij.*

20*th August*, (*fifteenth day.*)—*Relapsed yesterday.* The medicine prescribed on the 16th was taken, and produced the desired result. He went on improving, and without taking any drugs, or being confined to bed, till yesterday at 6 P.M., when he was seized with pain in the abdomen, and rigors. The rigors continued till midnight, and, when he was visited at 9 P.M., were attended by a good deal of cold clammy perspiration. The pain left the abdomen this morning after the operation of a dose of castor oil taken last night. In the relapse, the general pains have returned with more than their former severity.—*Quiescat.*

21*st August, noon*, (*sixteenth day.*)—He fell asleep at midnight, awoke at 5 A.M. much refreshed, and at present, feels much better

than yesterday. During sleep, he perspired pretty freely, and the skin is at present soft and natural. The tongue, which is moist, has a streak of yellow fur on its centre. The pulse is 76, and of a good character; the pains of the limbs are much relieved; the countenance, and bowels are natural; the appetite has returned.—*Quiescat.*

22*d August*, (*seventeenth day.*)—He slept well, and is free from pain, except in the left knee. He had during the night copious sweats, (not preceded by rigors,) which afforded no relief to his sensations of uneasiness and general soreness. The tongue is brown and dry, and he has much thirst, accompanied by anorexia, and a saline bitter taste in the mouth; the skin is hot, and dry; the pulse is 108, and rather small; the countenance is pale, and rather depressed; the bowels have been slightly opened; he is still taking the allowance of wine formerly ordered.—*Statim sumat pulv. jalap. comp.* ʒi.—℞. *nitrat. potassæ* ʒi, *spir. æth. nitr.* ℥ss, *aquæ acetatis ammoniæ*, *misturæ camphoræ*, āā ʒiv. *Misce. Sumat* ʒss *4tâ quâque horâ.—Contr. vinum.*

23*d August*, (*eighteenth day.*)—He slept none last night, from pain in the knee. The pulse is 110, full, and compressible; the tongue is coated with a moist yellow paste; he has much thirst, and complains of a disagreeable saline taste in the mouth; the skin is hot and dry.

Vespere.—He has had several stools, both before and after the forenoon visit, and is at present restless from abdominal uneasiness.—*Statim habeat enema amyli c. sol. mur. morphiæ* ʒi.

24*th August*, (*nineteenth day.*)—He did not get the enema of starch and morphia, but by mistake a domestic enema was administered, which was destined for another patient; at present, he has no diarrhœa. He slept well; the pulse is 108, and of moderate strength; he feels better, but complains much of debility.—*Quiescat.*

25*th August*, (*twentieth day.*)—At 2 P.M. yesterday, he began to perspire profusely, and continued to do so till midnight, sleeping the most of the time. The skin is at present hot, and dry; the tongue is moist, but is still partially covered in its posterior and central parts, with a dirty yellow paste; he has much thirst; the pulse is 116, and rather feeble; the bowels are open;

the general pains have been much relieved, since friction was made some hours ago, with soap and opium liniment.—*A pint of ale is now ordered, and his daily allowance of wine reduced to three ounces.*

26*th August*, (*twenty-first day.*)—He slept well; sweated none; feels better; and is free from pain. The tongue is cleaning, and moist; there is no thirst; the skin is natural; the pulse is 80, regular, but feeble.—*Quiescat.*

27*th August*, (*twenty-second day.*)—He slept well last night, and to-day feels better in every respect.

10*th September*, (*thirty-sixth day.*)—Since last report, he has gone on steadily improving, and is now dismissed in perfect health.

Case III.—Summary.—*Admission on the second day of the fever.—Remission—Relapse. Treatment; aperients, hydriodate of potash, and wine.*

John Mullans, a Scotchman, married, aged 32, a tailor, residing in Rattray's Close, of spare habit, and dark complexion, was

Admitted on 22*d September* 1843, (*second day.*) He states, that he has been always in tolerably comfortable circumstances, and generally in the enjoyment of good health. His wife is at present convalescent from an attack of the prevailing epidemic fever.

On the 21st, (yesterday), when sitting at the fireside, he was suddenly seized with chills, rigors, headach, and pain in the back. He continued in this state for about twenty minutes, when, after a few minutes more of uncomfortable heat and restlessness, a profuse perspiration broke out on the upper part of his body, the sweat falling in large drops from his forehead and face. He went to bed in this condition, and slept a good deal at intervals during the night; but awoke this morning in no degree refreshed, and oppressed with feelings of lassitude, and general soreness.

The face is distinctly bronzed; and the expression indicates anxiety and suffering; the pulse is 126, full, and soft; the tongue is white and moist; there is not much thirst; the bowels were opened once yesterday, but not to-day; the skin is hot, and

dry; there is no eruption of any kind on the skin; his intellect is clear; he has very severe headach; he feels very weak; he has some cough, and severe muscular and articular pains; but no pain in the chest or abdomen.—*Let the head be shaved, and cold water diligently applied to its whole surface, till the headach is relieved.—Habeat enema purgans statim.*

23*d September* (*third day.*) He slept none during the night; the head has been partially relieved by the cold applications; the pulse is 120, and strong. At present, he is bathed in perspiration. The bowels were opened by the enema.—*Admoveantur hirudines vi temporibus.—Habeat horâ somni solutionis muriatis morphiæ gtt. xxv formâ haustus.*

24*th September* (*fourth day.*) Only one of the leeches fastened, and very little blood was obtained by it; the headach, however, has been greatly relieved by the assiduous use of cloths, soaked in cold water. The pulse is 116, and smaller than yesterday. The skin is very hot; the general pains are very severe, and are especially acute in the shoulders, back, and knees; there is some abdominal pain, but it seems to be muscular; some pale yellow fur coats the tongue, which is painful, and of a bright red colour at the point, where the papillæ are seen appearing above the fur; the bronzing of the countenance is even more decided than on admission; he has had no stool since yesterday.—*Habeat olei ricini ℥iss statim; et horâ somni, enema amyli cum solutionis muriatis morphiæ ℥i.—Let the cold applications be assiduously continued.*

25*th September* (*fifth day.*) The castor oil and the enema were given as ordered; and the cold water has been very diligently applied to the head. The headach is almost gone; the tongue continues moist, and is cleaner than formerly.—*Repetatur enema amyli cum solutionis muriatis morphiæ ℥iss, horâ somni.*

26*th September* (*sixth day.*) He slept well last night, and feels very comfortable to-day.—*Quiescat.*

27*th September* (*seventh day.*) He slept well last night. In the afternoon of yesterday, he had two sweats, before which, he felt uncomfortable, but after which, he experienced great relief. The bowels are confined; there is no abdominal uneasiness; there is still a good deal of thirst; the bronzing is particularly well marked.—*Habeat enema purgans nocte.*

28*th September*, (*eighth day.*) Last night, the bowels were freely opened by the enema. The bronzing of the face is more striking than it has been; and the cheek on which he has been resting, has exactly the peculiar purple colour of a ripe apricot. There is some improvement in the expression of the countenance; the pulse is 104, and rather deficient in strength; the tongue is clean, but dry and parched. He has no headach, except when he sits up suddenly, which causes temporary throbbing and aching in the temples. He has some slight pains in the knees, and some rather severer in the shoulders.—*Habeat vini rubri* ℥*iv.*

29*th September*, (*ninth day.*) He has had some sound and refreshing sleep during the night; and at present, has a tendency to slumber, which was also exhibited yesterday. The pulse is 80, and of better strength; the tongue is moist, and, except at the point, has a thin coating of yellowish fur. Sudden movement of the head still excites throbbing and pain in the temples, but not to such an extent as yesterday. He has had no stool since the evening of the 27th; there is neither pain nor uneasiness in the abdomen.—*Habeat statim pulveris jalapæ compositæ* ℥*iss; et vespere, enema domesticum si opus sit.*

1*st October*, (*eleventh day.*) The bowels were freely opened by the medicine, the day before yesterday. He has been improving since last report. Last night, he slept well. At present, he makes no complaint. The pulse is 64, and of moderate strength. —*Quiescat.*

2*d October*, (*twelfth day.*) He passed a good night; and is much better than he has yet been. He has still very much debility, as has just been shown by the unsteady tottering step with which he walked down and up the ward, to exhibit the degree of strength which he possesses.—*Quiescat.*

3*d October*, (*thirteenth day.*) Since yesterday, he has gained a little strength.

4*th October*, (*fourteenth day.*) He was up for nearly two hours yesterday. He passed a good night, and has no remaining symptoms of the fever excepting the debility, (which is daily diminishing,) and a little of the facial bronzing.

5*th October*, (*fifteenth day.*) At 3 o'clock this morning, he

relapsed, having at that hour been seized on awakening from sleep, with rigors and headach. The rigors recurred several times before nine this morning, and were latterly associated with ardent fever. At the first seizure, he felt cold; and the nurse, at his request, put on two additional blankets. He has not sweated yet; but the skin has at present a tendency to moisture. Thirty-six hours have elapsed since his bowels were moved; the tongue is moist, and coated with a white fur; the pulse is 112, and of good strength; at present, the headach is very slight; and with the relapse, he has not as yet had any muscular or articular pains. —*Intermittatur vinum.—Habeat statim olei ricini* ℥iss.—*To have the limbs bathed in hot water at* 10 P.M.

6*th October*, (*sixteenth day.*) The bowels were opened by the medicine last night. He had some refreshing sleep, and gentle perspiration during the night. Since the last report was made, at noon yesterday, he has felt comfortable till now, when a slight chill, rigors and headach, have thrown him back. The tongue is clean and moist. He has some pain in the right thigh and left shoulder joints.—R. *hydriod. potassæ* ℥ii, *infusi gentianæ* ℥iv. *M. et solve. Habeat* ℥ii *ex aquâ ter in die.*

7*th October*, (*seventeenth day.*) To-day, the headach and general pains are very severe.—*Continuatur mistura hydriodatis potassæ. —Apply cold water diligently to the head.*

8*th October*, (*eighteenth day.*) The headach was soon relieved by the cold water. He slept none during the night, from severe pains in the shoulders, and through the body generally. At present, the least movement in bed causes great pain; the bowels are open; the tongue is white, and moist; the pulse is 120, and of moderate strength; there is much thirst.—*Continuatur mistura. Utatur linimento saponis cum opio.*

9*th October*, (*nineteenth day.*) After the free use of the soap and opium liniment, he slept well, and has enjoyed for the last twelve hours almost complete respite from the muscular and articular pains. His only complaint is of debility, which exists in a greater degree than in the majority of the patients.—*Intermittantur mistura et linimentum.—Habeat vini rubri* ℥iv.—*Common diet.—Allowed to rise for an hour.*

22*d October*, (*thirty-second day.*)—Since last report, he has been gradually, but slowly gaining ground. Pains in the shoulders,

thighs, and ankles have occasionally slightly molested him, and do so to some extent to-day. On the 13th, his wine was stopped, and a quart of porter substituted; on the same day, he began full diet; the porter is now stopped.

24*th October*, (*thirty-fourth day.*)—He is dismissed, free from all complaint, except of some pain and stiffness in the left thigh joint. He has greatly regained his lost strength.

Case IV.—Summary.—*First attack—Remission—Relapse on* 17*th day—Herpes labialis—Sudamina. Treatment; Aperients, &c.*

Harriet Rose, aged 26, of English parents, born in Edinburgh, a fancy fruit and flower worker, the wife of a strolling Italian organist, (resident in a lodging-house in the Grassmarket since May last,) with black hair, blue eyes, and spare development, was

Admitted 30*th September* 1843, (*fifth day.*)—She states, that though her general health is not robust, yet she seldom has severe illness, and, excepting the present attack, does not recollect of having had any serious disorder since childhood.

For two or three days before the 26th, she felt languid and feverish; and on that day, suffered a good deal from sickness, vertigo, headach, and pain in the back. During the two following days, she continued to have more or less vomiting. On the 28th, she got an emetic from a dispensary pupil. She has had no opening medicine.

The expression is good; the face is suffused with a purple colour; the pulse is 126, and small; the tongue is white, and moist; the bowels are open; the temperature is increased; there is no eruption on any part of the body, excepting on the lips, where there is much herpes labialis; the intellect is clear; she complains of vertigo, headach, a bad taste in the mouth, and muscular debility. There is a distinct Turner's line extending from the ensiform cartilage to the pubes. She was confined five months ago, and has nursed her infant up to the invasion of the present disorder. Her milk has been scanty. She has not menstruated since her confinement.—*Abradatur capillitium, et diligenter applicetur aqua frigida toto capiti.*

1*st October*, (*sixth day.*)—The headach was relieved, but not

removed, by the application of cold water. She has had a good deal of vomiting and diarrhœa: the former ceased, after drinking some lemonade; the latter, after a dose of the decoction of log-wood.

2*d October*, (*seventh day.*)—The countenance is improved; and she feels better to-day. The pulse is 120, and of good strength; the bowels are confined; the tongue is much the same as on admission; the skin is hot, and dry; the causes of complaint are great thirst, and pain in the shoulders.—*Sumat statim pilulam colocynthidis compositæ j.*

3*d October*, (*eighth day.*) From her own statement, and that of the nurse, it appears, that she has been very restless, hot, and uneasy, since last report, frequently wakening in a fright from disturbed slumber. At present, she complains of confusion of ideas, and general coldness of the surface: the countenance is abstracted, and little if at all depressed; the conjunctivæ are injected, and the eyes streaming with tears; the pulse is 98, and rather weak; there is neither headach nor pain in any part of her body. The pill produced no stool.—*Vespere, sumat olei ricini ℥i.*

4*th October*, (*ninth day.*) When seen last night, she was suffering much from cough, and oppression at the chest. The application of a sinapism to the thorax has removed both these symptoms. The bowels have been opened by the castor oil; the countenance is much improved; the pulse is 96, and of good strength; there is great complaint made of general pains in the muscles and joints; moving in bed causes much suffering, and is attended with great difficulty, the limbs being at times quite powerless; when at rest, she feels easy, and comfortable.—*Quiescat.*

6*th October*, (*eleventh day.*) The tongue, skin, pulse, and countenance, are natural, excepting that the latter is bronzed. Her strength is returning.—*Quiescat.*

8*th October*, (*thirteenth day.*) There has been progressive improvement since last report. The general pains and stiffness of the joints, however, are such as to render it impossible for her to put on her clothes, otherwise, she might be out of bed with advantage.—*Quiescat.*

12*th October*, (*seventeenth day.*) The improvement was going

on steadily, till last night about eight o'clock, when she was seized with headach, rigors, and subsequent sweating. She slept ill during the night. At present, there is no headach; the pulse is 134, and of moderate strength; the tongue is coated with a thin, brown, moist fur; there is much thirst; the bowels are open; the skin is hot, and dry.—*Quiescat.*

13*th October*, (*eighteenth day.*) Early this morning, she was seized with rigors, followed by cold perspiration. Since that time, she has had numerous chills, with trembling and shaking of the body, followed by cold sweats. At present, she is very uncomfortable; and has a cold clammy moisture on the skin; the pulse is natural, the tongue is clean and moist; the bowels are open; there is considerable cough; both cheeks have the ripe apricot appearance to a striking extent.—R. *lincti opiati* ʒij. *Habeat* ʒi *pro dose, tusse urgente.*

14*th October*, (*nineteenth day.*) Since yesterday, she has almost constantly had profuse cold sweats on the upper part of the body, excepting the arms, as far down as the epigastrium. The chest exhibits a most beautiful example of sudamina; thickly set, on the whole of the anterior and lateral walls of the thorax, are an infinity of white vesicles of the average size of a pin's head, giving to the surface, at a short distance, a soft chalky appearance. Vesicles of the same description are also pretty abundant upon the neck and abdomen, a very few are to be seen on the thighs, and there are none on the arms or legs. The sweat at present on the surface, particularly that on the chest, intensely reddens litmus paper. The bowels are open; there is some cough.—*Continuatur linctus.*

15*th October*, (*twentieth day.*) The sudamina have entirely disappeared, and the sweating ceased; the oppression at the chest, and cough, have greatly increased.—*Omittatur linctus.*—R. *olei crotonis tiglii, olei olivarum* āā ʒiij. *Misce. Signetur. The half to be rubbed in on the anterior surface of the chest this evening, and the rest to-morrow morning.*

16*th October*, (*twenty-first day.*) The cough and oppression are somewhat easier. The surface to which the croton oil was applied is red and itching. She is gaining strength, and has a good appetite.—*Let two drachms more of the liniment be rubbed into the same surface.*

17*th October*, (*twenty-second day.*) A copious crop of very small pustules has been brought out by the croton oil. There is hardly any cough, and no oppression on the chest; the general pains are much relieved, and in every respect, she is much better.—*To have full diet.*

21*st October*, (*twenty-sixth day.*) Since last report, she has been rapidly gaining strength. She is now dismissed, free from every complaint.

8*th November.*—Since dismissal, she has been much in the Hospital in attendance upon her husband. She suffers from œdema, pain, and stiffness of the legs, with general debility; but has a good appetite, and is in other respects well.

CASE V.—SUMMARY.—*First Attack—Intermission—Relapse on the 14th day, causing abortion—denial of pregnancy—bronchitis in both attacks. Treatment; blister to the chest, morphia and ipecacuanha lozenges, and aperients.*

Lucy Gartlan, Irish, single, aged 22, a field worker, residing in the High Street, of short stature, and strong conformation of body, with red hair, and light eyes, was

Admitted on September 9, 1843, (*third day.*) She states, that up to the moment of her seizure, she had plenty of food, and was in full employment. She has always enjoyed perfect health. The epidemic fever is at present in the house where she resides.

On the 7th, without any premonitory symptoms, she fell down in a state of exhaustion, when at work in the fields, exposed to a strong midday sun. Immediately afterwards, headach, general pains, and vomiting set in, which along with sleeplessness, have continued with considerable severity till now. She had no rigors at the invasion of the disease, and very little sweating. She has had no medical treatment, nor done anything for herself, beyond taking a dose of sulphate of magnesia; the expression of countenance is excited and restless; the pulse is 110, full, and strong; the tongue is dry, and coated with a white fur; there is much thirst; the bowels are confined; the skin is dry, and the temperature of the body much increased; the intellect is clear; the headach is intense; the muscular and articular pains are severe; the taste is vitiated, and somewhat saline; the muscular power

is depressed; there is some cough, and bronchitis; there is no abdominal uneasiness. From the bulkiness, and form of the abdomen, there seems to be good reason to believe, that she is pregnant, although she indignantly denies the possibility of such a thing.—*Habeat trochiscarum morphiæ et ipecacuanhæ l. Sig. One occasionally, when the cough is troublesome.—Applicetur vesicatorium pectori.*

12*th September*, (*sixth day.*) The cough and bronchitis have left her; and since a sweat yesterday, she has had no unpleasant feelings of any kind, excepting a slight pain in the left shoulder-joint. The tongue, pulse, and skin are natural. She still stoutly denies being pregnant; but offered no objection to the examination which was deemed necessary to elucidate this point. The mammæ are flabby, and neither turgid nor knotty. The nipple lies depressed in a slit-like sulcus in the centre of the areola. Both areolæ, but particularly the right one, are of an unusually deep colour for a virgin, which the patient professes to be. The abdomen is smooth, as in women who have never borne children; the integuments have a tense appearance, and exhibit no trace of the dark line.[1] Two fingers have now been carried up to the os uteri, and trial made of the internal repercussion test. The pat with which the tumour fell back on the fingers, after it had been jerked upwards, leaves no reasonable doubt as to the existence of pregnancy. By means of the stethoscope, uterine blowing is heard, and also, (perfect stillness having been obtained in the ward), the double tic tac of the fœtal heart. The only place in which the fœtal heart can be detected, is in a small space, situated three inches below the umbilicus, and a little to the right of the mesial line. Its pulsations are 144 in the minute, (or seventy-two double beats), whilst those of the mother are 98. She still denies being pregnant; and has exhibited great indignation, whilst the above report was being dictated.—*Quiescat.*

[1] Mr Turner of Keith has described (Monthly Journal, vol. ii.) a dark stripe, extending from the ensiform cartilage to the pubis, as a sign of recent delivery. I have found, that this is met with in various circumstances, in both sexes. Part of the above details refer to this subject, in the investigation of which I was engaged when the cases detailed in this memoir were reported, a circumstance which will account for occasional allusions to it.

13*th September*, (*seventh day.*) Every symptom of the epidemic disorder is at present in abeyance, excepting the bronzing of the countenance, which is now more marked than it has yet been.

Since yesterday, she has confessed to the nurse, the possibility of her pregnancy; but stated, that till now she never supposed herself to be in that condition. She has not menstruated for five months.—*Quiescat.*

14*th September*, (*eighth day.*) She continues quite well.—*To have full diet.*

20*th September. Vespere.* (*fourteenth day.*) Till six o'clock this evening, she has continued quite well. In the forenoon, the bowels having been reported confined, a dose of castor oil was ordered, which she took at three o'clock; and at six P.M., in consequence, she at first supposed, of the medicine, she felt uneasy feelings in the lower part of the abdomen. At present, she has slight bearing-down pains, and the os uteri is somewhat dilated. For some hours past, there has been a flow of a red-coloured discharge from the vagina.—*Quiescat.*

21*st September*, *noon*, (*fifteenth day.*) After much suffering, she gave birth to a still-born male fœtus, of apparently six months, at half-past three this morning. The presentation was natural; and the placenta came away along with the fœtus. There has been no hæmorrhage; and she is doing well in every respect, excepting that there is some return of the bronchitis.—*Habeat troch. morphiæ et ipecacuanhæ l.*

22*d September*, 8 P.M., (*sixteenth day.*) She passed a feverish, sleepless night, but has slept a good deal during the day, and is at present comfortable. The pulse is 76, and feeble. The chest symptoms have almost disappeared. No uterine tumour can be felt above the pubis. There is no Turner's line.—*Continuantur trochiscæ.*

24*th September*, (*eighteenth day.*) She continues to gain strength daily. The only complaint is of some slight remains of muscular and articular pains. The pulse is 90, and of good strength; the tongue is moist; there is some thirst; the skin is natural; the cough is almost gone. The areolæ are much darker than previous to the miscarriage. The discharge is now greenish; it has always been scanty, and is so still. The bowels are confin-

ed.—*To have three seidlitz powders, and twenty-five more of the lozenges.*

30*th September*, (24*th day.*) Since last report, she has gone on steadily improving, and is now well and free from all complaints.—*Allowed to rise; and to have full diet.*

4*th October*, (28*th day.*) She is dismissed in the enjoyment of perfect health, excepting that there are occasional slight returns of the general pains at night. She looks healthy; and has hardly any trace of bronzing. The abdomen has been examined today, and almost daily since abortion; but not the slightest trace of a dark abdominal line has ever been detected.

The foregoing cases give a fair view of the Natural History of the disease, in its mild or common form.

CHAPTER II.

HIGHLY CONGESTIVE FORM OF THE DISEASE.

Although many of the cases issuing in death, or characterized by extreme severity, present symptoms very different from those hitherto detailed, there can be no doubt, that the disease is essentially the same, the difference being one only of degree, as will be more specially unfolded hereafter. Both forms are undoubtedly the result of the same morbid poison.

One of the most common symptoms in the highly congestive form of the disease, is yellowness of the conjunctivæ, and of the whole surface of the body. It generally appears between the third and seventh day, and is always most intense on the face, neck, chest, abdomen, and thighs. The hue of the neck and chest is the most vivid; then comes, of equal, or nearly equal brightness, the abdomen; then, somewhat fainter, the thighs; then, considerably paler still, the legs, arms, and fore-arms; the hands and feet get their colour later, always to a much less extent, and sometimes not at all. The yellowness occasionally appears during the relapse, and not in the first attack. I have seen it present in both.

Associated with the yellowness, there are generally depression, less or more delirium, dusky, and often porter-coloured urine, black melæna-like stools, and hæmorrhages from some of the mucous membranes. In the worst of the cases, black coffee-ground-like matter is ejected from the stomach, and passed per anum.

In some cases, the black vomit occurs without the yellowness; and, on the other hand, at the autopsy of yellow patients who have had no black vomit, this matter has been found in the stomach, and other parts of the alimentary canal.

Enlarged liver and spleen, and tender and tympanitic abdomen are less constant, but still, very usual symptoms in cases characterized by yellowness or extreme congestion. Difficult mic-

turition has been complained of by several of my yellow and purple patients.

A deep persistent purple colour of the face, appearing before, or immediately after the invasion of the disease, is a certain prognostic of danger, and is seldom absent in those destined to be yellow. Since I first made this observation, it has received, among others, two notable verifications in the cases of my assistant, Dr Heude, and Mary Wallace, one of the nurses. Dr Heude I pointed out to my other assistant, Mr Reid, as deeply purple at noon, when we were engaged with the visit:—at 3 P.M. he was in the initial paroxysm of the fever. Mr Reid and I remarked Mary Wallace becoming first bronzed, and at last purple, before she was laid up, and in consequence advised her to take the chlorinated solution, which she did not do. Both became yellow, and both narrowly escaped with their lives.

With the exception of the purple countenance, the symptoms which usher in the congestive form of the disease, differ little from those attending the disorder in its milder degree. As has already been remarked, there is some considerable difference in the cases as to the time at which the yellowness appears.

Generally, in the severe cases, there is merely a remission about the seventh day, but no intermission; and even in those who died a few days later, a slight amendment was noticed about the usually critical period.

In my dissections of the purple and yellow cases, I have uniformly found bile in the gall-bladder, a pervious state of all the bile ducts, and bile in the duodenum. Excessive capillary congestion was always met with; and in the severe cases, exuded blood was found between the muscular and mucous coats of the intestines. The pathological details, however, it will be more convenient fully to analyse and consider, after the subjoined reports, which, I may state, describe the whole of the highly congestive cases admitted into the New Fever Hospital, during the period of my Physicianship.[1] These reports are given, (with a few verbal amendments), verbatim, as they were dictated by myself at the bedside, and in the theatre of anatomy: in not one instance have I ventured to supply defective reports from impressions remaining after the lapse of days or even hours.

[1] See the Tables in the Appendix.

CASE VI.—SUMMARY.—*Purple countenance—epistaxis—black vomit, without yellowness of the skin—slight improvement on the seventh day—Death on the tenth day.—On Dissection, the bile ducts were found pervious, and the gall-bladder contained inspissated bile; the gastro-intestinal mucous membrane was here and there dark-coloured, with submucous exudation of blood in patches; a considerable quantity of black matter, similar to what was vomited during life, was found in the stomach, œsophagus, pharynx, and posterior nares.*

James Law, a Scotchman, widower, aged 74, a spare broken-down old man, with light hair and eyes, was

Admitted on 9th August 1843, (*fourth day of the disease.*)—His occupation has been that of a labourer; but for the last eighteen months, he has been an inmate of the House of Refuge, where he states, that he had enough of food.

On the 6th August, he was seized with rigors, without headach. There was fever at this time in the House of Refuge.

His face is of a deep purple colour; the expression is not anxious; he complains of general pains, great muscular depression, and slight cough; the pulse is 68; the tongue is moderately moist, clean, and very red at the point: there is no eruption on the skin, which is moist; he is drowsy, but has no headach; he has had no epistaxis, nor other hæmorrhage; the bowels are open.—*Quiescat.*

10*th August*, (*fifth day.*) The tongue has become dry throughout, and furred behind; the pulse is 78, and stronger than yesterday; the bowels are slow.—*Habeat olei ricini* ℥*i*, *statim.*

12*th August*, (*seventh day.*) The bowels have been moved by the medicine; the skin is moist; the pulse is soft, and natural; and the tongue is cleaning. He was restless, and raved somewhat during the night.—*Habeat vini rubri* ℥*iv.*

Vespere. He is more incoherent. There has been some epistaxis from both nostrils. Some time after this, he fell, when crossing the ward to the water-closet,—which, from there being no night-chairs or bed-pans as yet in the hospital, the patients are obliged to visit, when quite unfit for such exertion.

13*th August*, (*eighth day.*) To-day, the countenance is greatly depressed; the pulse is 80, and feeble; he has had copious discharge of black fluid blood from the mouth and nostrils—what was collected, measures twenty fluid ounces, (apothecaries' measure,) but, from the soaked appearance of the clothes and bedding, it is evident, that a considerable additional quantity has been lost. This hæmorrhage commenced at 10 P.M. last night, (when the nostrils were plugged, and other measures taken for arresting it,) and continued to a greater or less extent, till half-past eight this morning, when it somewhat abated. At half-past twelve noon, he could hardly articulate, and the pulse was excessively feeble; but before the visit was completed, it had become 78, and rather firmer, soon after getting a little negus. Then, also, he could articulate, though indistinctly. He has taken about five ounces of wine since the visit yesterday.—R. *acetatis plumbi gr. xxiv, aquæ distillatæ ℥vi. Solve. Habeat ℥i sextâ quâque horâ.—Continuatur vinum ad ℥vi; the wine to be given cautiously.*

Half-past nine P.M. He has had a little more epistaxis since the forenoon visit, and has vomited eleven fluid ounces of a dark-coloured fluid, exactly resembling coffee-grounds. He has slept from noon till now, excepting when disturbed by the vomiting; but his sleep was broken. The pulse is 80, soft, and compressible, but fully as firm as at the forenoon visit. None of the mixture prescribed has been administered.

14*th August*, (*ninth day.*) After the evening visit last night, he slumbered till half-past four this morning, when he was roused by a return of the vomiting, and ejected about three ounces of a black fluid, exactly resembling coffee-grounds, and bearing no resemblance whatever to blood. After this, he slumbered on till 7 A.M., when he had an attack of rigors. The nurse states, that he had opisthotonos at this time, being quite insensible, and to all appearance *in articulo mortis.* He has at present, some subsultus tendinum; he lies on his back, with a collapsed, but easy countenance; the breathing is noisy; the respirations 26 in the minute; the pulse is about 120, very weak, but varying considerably as to number within a brief space of time. The impulse of the heart is almost imperceptible, and the first sound is inaudible; the apex is under the sixth rib. There is strong pulsa-

tion at the epigastrium, and extending in the mesial line, from the ensiform cartilage to near the pubes. There is no abdominal tenderness on pressure; the tongue is dry, and coated with a black paste, and the teeth have a similar covering; the pupils are not much influenced by light; the eyes are suffused, and have a somewhat glazed appearance; the voice is husky and feeble, but he seems coherent, and answers questions rationally; the temperature of those parts of the body which have been sufficiently covered is natural, but the feet and other parts which have been exposed are cold; some alvine evacuation has taken place, similar in appearance to the matter vomited; he has taken four ounces of the wine, and an equal quantity of the acetate of lead mixture.—*To have the abdomen fomented with hot water, and hot bottles applied to the feet.—Continuatur vinum, et intermittatur mistura.*—R. *mur. hydrarg. corrosivi gr. iv, opii gr. viij, extracti gentianæ q. s. ut fiat massa, in pil. xvi pares dividenda. Habeat unam secundâ quâque horâ.*

15*th August*, (*tenth day.*) He died at half past ten A.M., having sunk gradually, and having apparently retained his consciousness to the last. He took several of the pills, had no return of the vomiting or epistaxis, and no more stools.

SECTIO CADAVERIS, 17*th August* 2 P.M., *being fifty-two hours after death.*

External Inspection.—The external surface of the body and the conjunctivæ are found, on minute examination, to have no yellow tinge. There are large livid patches on every part of the body.

Internal Inspection.—Thorax.—The left lung weighed two pounds four ounces;[1] it was much congested behind, but anteriorly, was almost destitute of blood, and in an emphysematous state, depending probably upon incipient putrefaction: upon opening the thorax, it seemed to fill up about one-half of its own side. The right lung weighed two pounds thirteen ounces; it was connected by firm adhesions at every point of its surface, evidently from inflammation of no recent date. There was scarcely any effusion into the pleural cavities; the pericardium contained an ordinary quantity of fluid; the heart weighed thirteen ounces, and exhibited no softening or valvular disease. In the right

[1] Once for all it may be well to state, that the organs are weighed by the imperial standard weights; and the fluids measured by the apothecaries' fluid measure.

auricle, there was a large well organized firm clot, and also some black half-formed clots in the left auricle; in both ventricles, there were some large clots, and the aorta contained a firm white clot.

Abdomen.—The spleen weighed six ounces, and was firm and natural in texture, but was certainly under the average bulk. The liver, with the gall-bladder and its contents, weighed four pounds six and a half ounces, and was upon the whole natural in colour and consistence. The gall-bladder was greatly distended with bile, resembling treacle, but of a rather darker colour; it was not ropy, but considerably inspissated. The gall-ducts were pervious. The duodenum was tinged of a deep yellow colour by the bile; and when this was washed off by a properly directed stream of water, the mucous membrane was seen to be injected, and diversified with occasional black patches. The greater curvature of the stomach was much congested, and there seemed to be some extravasation of blood into the submucous cellular tissue in that part of the organ. The mucous membrane was of natural firmness, excepting at the congested parts, where it was much more easily torn by the nail. No ruptured vessel could be detected in the stomach, nor indeed in any part of the alimentary canal, which was examined in its whole extent. Some black matter, similar to what was vomited by the patient during life, was found in the stomach, œsophagus, pharynx, and posterior nares, in which latter situation it was mixed with mucus. There was some vascularity and congestion of the ascending and transverse portions of the colon, occurring in patches. Under these patches, there was seen a well-marked effusion of black blood, into the submucous cellular tissue. There, as in the stomach, the mucous membrane was firm, excepting at the congested parts. Some granular patches were seen on the mesentery, but the glands were healthy. The right kidney weighed six and a half ounces, and was healthy; the left weighed five ounces, and was also of the ordinary aspect, excepting that two hydatids were observed on its posterior surface.

Head.—Upon removing the calvarium, it was found to be firmly attached to the dura mater, over the posterior termination of the superior longitudinal sinus; and at this part, the bones were rough. Under the dura mater and arachnoid membranes,

there was the usual quantity of fluid. The membranes were not congested. The brain itself was firm, not vascular, and of a natural colour. The ventricles contained the usual quantity of fluid. The cerebrum weighed two pounds one ounce and a half: the cerebellum, pons Varolii, and medulla oblongata, weighed conjointly six ounces.

There was no extravasation of blood into the muscular tissue, in any part of the body incised during the autopsy; but no incisions were made specially for the purpose of determining whether such extravasation existed in any other part of the muscular system. No yellowness was observed in the muscles, serous membranes, bones, or cartilages.

Case VII.—Summary.—*Epistaxis—jaundice and delirium—Death on the seventh day.—On Dissection, the serous membranes, conjunctivæ, cartilages of the ribs, &c. were found to be yellow; the bile-ducts were pervious; the gall-bladder contained inspissated bile; the gastro-intestinal mucous membrane was dark-coloured, with black patches, and submucous exudation of blood;—the internal surface of the heart was stained of a deep yellow colour, and the organ itself was very soft.*

George Johnstone, a particularly strong and muscular individual, a native of St George's, Grenada, aged 20, married, resident in Edinburgh only during the last eight days, was

Admitted 8th August 1843, (*third day.*) He was seen by Dr Craigie on the 8th, and by me, for the first time, on the 9th, when it was impossible to obtain the previous history of his disease, either from himself or others.

9th August, noon, (*fourth day.*) He complains of pain in the temples and abdomen, with general uneasiness. The abdomen is greatly distended; the bowels constipated; the skin very dry; the tongue moist and foul. He passed a very restless night.—R. *pulv. jalapæ compositæ ʒi, calomelanos gr. iij. Misce. Statim sumat.—Habeat enema domesticum vespere, si non prius solvatur alvus.*

Vespere. He feels easier. The powder produced several scanty fluid stools. The enema was administered, and immediately re-

jected with force, by the escape of flatus. The abdominal distension is considerably diminished.—R. *olei ricini, aquæ menthæ pip. āā ℥ij, sol. mur. morphiæ gtt. xv. Ft. haustus cras mane sumendus.*

10*th August*, (*fifth day.*) He slept a good deal during the night, but looks worse than yesterday. The castor oil draught which was given at half-past five o'clock A.M., has not yet operated, and the tympanitis has increased; the skin is dry, as it was yesterday; the pulse is 90, and feeble; the respirations are 42.—*Habeat enema purgans statim.*

Vespere. From an irregularity, depending upon the defective service of the hospital, the injection has not been administered. The bowels have not been opened, and the tympanitis has increased.—*Habeat enema purgans statim; et haustum olei ricini, aquæ menthæ pip. āā ℥ij cras mane.*

11*th August*, (*sixth day.*) The countenance is less anxious than yesterday. He had no relief from the enema administered last night; and the nurse could not prevail on him to swallow the castor oil draught this morning. The skin is somewhat softer than yesterday; the eyes are suffused; the pupils somewhat dilated; and there is yellowness of the conjunctivæ; the pulse is 68, soft, feeble, and regular; the extent of the tympanitis seems to be the same as yesterday, but there is more abdominal tenderness on pressure; the tongue is dry, but not parched, clear at the edges and point, but coated with a brownish fur behind. He had some epistaxis, about half-past three o'clock A.M., which was followed by considerable relief to his sensations.—*Habeat vini rubri ℥vi.—Admoveantur hirudines vi abdomini infra umbilicum.* R. *olei crotonis gtt. iv, extracti colocynth. compos. gr. xij. Misce, et divide in pilul. iv pares. Habeat unam secundâ quâque horâ, donec alvus soluta fuerit.*

Vespere. The leeches have bled well, and there is still much blood oozing from their bites. There is less abdominal tenderness. He is excessively obstinate, and difficult to manage; and in consequence of his violence, the nurse has not been able to administer the pills. He has had no stool.—*Let three drops of croton oil be applied to the back part of the tongue; and if he has not a stool within an hour, let him have an enema, with eight drops*

of croton oil, in about an ounce of gruel, which must be well thrown up.—Habeat liquoris sodæ chlorinatæ ℥ss; et sumat ex aquâ gtt. xx 3tiâ quâque horâ.

12*th August*, (*seventh day.*) He is much worse; and is at present lying on his back, moaning much. He cannot be roused to answer questions; but he gives indications of feeling pain, when pressure is made over the abdomen, which communicates the same sensation to the hand as it did yesterday, excepting that the skin is cold and clammy, as on other parts of the body; the teeth and mouth generally are encrusted with black sordes; he has had more epistaxis; the conjunctivæ are much yellower than yesterday; the bowels have not yet been moved. He began the chlorinated solution this morning; and has had more than his allowance of six ounces of wine. In accordance with the prescription of last night, the croton oil was applied to the back part of the tongue; but from negligence, the enema has not been administered.—*Habeat vini rubri ℥x. Applicr. emplastrum vesicatorium toto capiti.—Injic. enema cum olei crotonis gtt. x, et spirit. terebinth. ℥ij statim; et enema domesticum cum sol. mur. morphiæ ℥ss post horam.*

Vespere. At half-past three P.M. the enema was administered, but it produced scarcely any evacuation. The blister was applied about 1 P.M. About 2 o'clock, he became much calmer; and died, apparently without suffering, at 5 P.M.

Sectio Cadaveris.—14*th August, at half-past* 1 P.M.

External Inspection.—Since death, the conjunctivæ have become more yellow. There are some excoriations on the penis, and scrotum, which parts have a bruised appearance.

Internal Inspection.—Thorax.—The cartilages of the ribs, the pleuræ, and the subcutaneous cellular tissue, exhibit a deep yellow tinge; in cutting through the cartilages of the ribs, a yellow fluid exuded from their centres. The lungs are healthy, but much congested with blood posteriorly, as was to be expected from the supine position of the patient, previous, and subsequent to death. The right lung weighed 1 lb. 6 oz.; the left, 1 lb. 1 oz. The bronchial mucous membrane was much reddened and congested. The heart weighed 14 oz.; it was very soft, and its internal surface was stained of a dark yellow colour,

by the contained blood and serum; it contained one or two imperfect clots; all the valves were healthy.

Abdomen.—The serous covering of the intestines and abdominal walls was deeply tinged with yellow. There were some adhesions, apparently of old standing, between the gall-bladder and intestines. There was no effusion into the abdominal cavity; and no injection or redness of the peritonœum. The mucous membrane of the stomach was unusually thick, but apparently healthy. The mucous coat of the duodenum was also very thick; it had a blackish hue, but was in other respects natural. In the colon, there was some black fœculent matter, and its mucous membrane, besides having the same black, dyed-like appearance seen in the duodenum, exhibited black patches at intervals. In these places, the mucous membrane exhibited its natural tenacity. By carefully raising up the mucous membrane from the black patches, they were distinctly seen to be produced by exudation of blood into the submucous cellular tissue. The solitary glands were healthy. The internal surface of the jejunum and ileum presented the same dark colour as that of the duodenum, excepting that it was less deep in hue, and not quite general. The liver weighed 4 lb. 15 oz., and was of the natural colour and consistence, so far as mere cursory inspection and feeling could entitle one to decide. The bile-ducts were pervious; and on firmly pressing the gall-bladder, a little bile flowed into the duodenum. The gall-bladder was flaccid, and contained rather less than the quantity of bile usually found, which resembled tar in appearance, was excessively viscid, and could be rolled out and suspended for some seconds on the knife, as if it were a coherent membrane. The spleen weighed 1 lb. 5½ oz.; it was firm, much congested, and enlarged; its altered condition was obviously of long standing. Both kidneys were of a yellow colour in all their textures; the right weighed 8 oz.; and the left 10 oz. The bladder was healthy, and contained some ounces of deep golden-coloured urine.

Head.—The integuments, when cut into, exhibited a deep yellow colour; and the cranial bones themselves were decidedly of the same hue. The dura mater was of a deep yellow colour. There was a small quantity of yellow sub-arachnoid effusion. The late-

ral ventricles contained a drachm of yellow serum, of which there was also a little seen at the base of the cranium, when the brain was removed. The substance of the brain was firm, and more vascular than usual.

CASE VIII.—SUMMARY.—*Admitted apparently* in articulo mortis *—jaundice—hæmorrhage from the rectum.—Upon Dissection, the bile-ducts were found pervious, the gall-bladder contained tenacious, inspissated, tar-like bile; the gastro-intestinal mucous membrane exhibited vascularity, and sub-mucous exudation of blood: under the endo-cardium, especially in the left ventricle, there was considerable effusion of blood.*

A. Campbell, a Scotchman, aged 40, married, a shoemaker, residing in Stevenlaw's Close, was

Admitted, 1 P.M., *25th August*, 1843. He lay in a collapsed and insensible state. On being roused, in answer to questions, he says, that he has no pain; but he can give no account of himself. The extremities are quite cold, and the temperature over the whole body is much reduced; the fingers are white, and the nails blue; the tongue is moist, and coated with a black paste; there is distinct yellowness of the conjunctivæ, and surface of the body; the face is sunken, haggard, and of a pale lemon colour; he has singultus at times; he has hæmorrhage from the rectum; the pulse at the wrist cannot be felt; there is, on the right side of the epigastrium, a raw surface occasioned by the application of a blister; numerous purple spots, as large as peas, are scattered over the arms, chest, and abdomen. No friend or relation accompanied him to the hospital; and the nurse has learned that he has been removed from home, contrary to the advice of his medical attendant.

As soon as he was laid in bed, heat was applied to the feet, sinapisms to the calves of the legs, a special watch appointed, and spirits and wine ordered to be given as circumstances indicated.

Quarter to 11 P.M. Since admission, at 1 P.M., he has taken four ounces of whisky, and two ounces of wine; the extremities, but not the trunk, have become much warmer; the pulse is 66, intermitting, very small, and feeble; he appears to be slightly re-

vived, but the singultus continues, being always excited by taking fluids, which he swallows, though with difficulty.

26*th August, noon.*—He slept quietly during the night; and seems to be in much the same state as when reported last night; the pulse is, if anything, a little firmer. He has taken, since admission, 10 ounces of whisky, and 2 ounces of wine.—*Habeat ex aquâ, liquoris sodæ chlorinatæ gtt. xx, tertiâ quâque horâ. —Continuatur spiritus communis.*

He expired in the evening.

Whilst we were engaged with the autopsy, Mr Thomas Lee, happening to come into the theatre, recognised the body as that of a dispensary patient, whom he had attended from the 18th of August, up to his admission into the hospital, on the afternoon of the 25th. He afterwards had the goodness to send me a copy of the memoranda which he kept of the case. As they contribute to make the narrative more complete, they are here introduced.

"*August* 18*th.*—*Fever?*—Muscles well developed and hard; has been subject to rheumatism, and winter cough; little work, and deficient supply of food; some bronchitis. *August* 19*th.*—Has ringing in the ears, and a good deal of headach; pulse 100, full, and very firm; has appetite for food. Made to sit up in bed, and hold the bowl, whilst he was bled; about ℥xvi flowed in a full stream; when the pulse became a little softer, the arm was tied up; no sickness was caused, and the only apparent effect of the bleeding was to make the head a little easier.—*August* 20*th.* Feels much better; the pulse is 120, full, and soft; pains in the left groin, and right shoulder; tongue is dry, and covered with a white fur; the bowels have not been opened by a colocynth and blue pill taken; took a herring, with bread and coffee this morning. He got up last night, after the bleeding, to kindle the fire, and whilst so engaged, fell with his head into the grate.—*August* 21*st.* Pulse is 112, full, and soft; tongue dry and yellow; skin cool; feels comfortable, and thinks that he is recovering, but seems a good deal exhausted; cough not troublesome, except on exertion; no headach, except when he coughs; complains of ringing in the left ear; the bowels have not yet been moved, although he has taken seven pills composed

of equal parts of the compound colocynth and blue pill mass; his appetite continues; he takes coffee, bread, and gruel. Ordered to take two colocynth and hyoscyamus pills every three hours till the bowels are moved.—*August* 22*d*. A great change for the worse; he lies in a lethargic state, approaching to coma, but can be roused; the breathing is drowsy; the voice is almost inarticulate; his tongue seems to be too large for the mouth; complains of weakness of the right leg, but the sensation is equal, and natural in both; he grasps most firmly with the left hand; the bowels have been moved; the pulse is 100, soft, and easily compressed; some hiccup. Ordered three ounces of wine, and a turpentine enema, and if the lethargy continues, a blister to the head.—*August* 23*d*. Did not use any of the remedies prescribed yesterday; and is much in the same state. A good many large purple spots have come out on his arms; the pulse is 90, full, soft, and very compressible; the tongue is covered with a clammy, ash-coloured fur; when he breathes, he puffs out the left cheek; some raving; hiccup; no stool. Ordered an aperient, a blister for four hours to the epigastrium, and some wine.—*August* 24*th*. Pulse is 72, and irregular; the tongue is dark, but moist; the skin, and conjunctivæ are yellow; the purple spots have increased in size and number, and are now to be seen in abundance, on the arms, chest, back, and abdomen; the stools are loose, and black; considerable hæmorrhage from the bowels last night; some hiccup at present, but has had none since yesterday till now; speech improved; has been much improved by a very little wine. His wife and himself are most anxious for his removal to the hospital, against which hazardous proceeding I have earnestly dissuaded them.—*August* 25*th*. Pulse is 90, weak, and very irregular; he is very yellow; the speech is almost natural; he passes his stools in bed. Whisky, and pills of acetate of lead and opium prescribed. When I returned at night, I found that he had been carried off almost naked to the hospital."

Sectio Cadaveris, 28*th August*, 2 p.m.

External Inspection.—The blistered surface is highly injected with blood, and of a yellower and darker colour than the rest of the body, except the scrotum, the whole of which is ecchymosed. The purple spots are less distinct than during life.

Internal Inspection.—Thorax.—Upon opening the chest, the cartilages of the ribs, and the pleuræ were observed to be yellow. The lungs had the carbonised appearance of what is termed the colliers' lung; they crepitated all over, and were not in any part indurated. The left lung, in its upper and middle lobes, was condensed, and a portion of it, when cut into, sunk in water; it weighed one pound twelve ounces. The right lung weighed two pounds twelve ounces; and both would have weighed more, had the weights been used before the organs were cut into, and blood thereby allowed to escape from them. The heart weighed twelve ounces, and was healthy in structure; its lining membrane was reddened, and in some parts, but chiefly in the left ventricle, there was much extravasation of blood under it.

Abdomen.—The peritoneum was observed to be yellow, and in some parts injected. The stomach, over one-third of its whole surface, exhibited a very black colour, from the presence of blood effused on the surface of, and under the mucous membrane. The colon was a good deal injected in various places; and in it, and other parts of the intestinal canal, were black spots caused by the exudation of altered blood. The rectum was intensely injected; there was sub-mucous effusion of blood in it, and a good deal of black altered and loose blood was lying on the mucous membrane: this appearance in the rectum was very similar in kind to that found in the stomach. The bile-ducts were pervious; and the duodenum was stained with bile, and diversified with black patches, caused by the effusion of blood upon, and under the mucous membrane. The gall-bladder was full, but not distended; its contents were inspissated bile, like tar, but more glistening, which, when raised on the back of the dissecting-knife, hung down tenaciously in a membranous-looking mass. The liver was softer than natural; and when cut into, the section exhibited a dingy lightish colour. The spleen weighed 8 ounces, and broke down readily under the fingers. The blood-vessels of the mesentery were highly injected. A section of the kidneys displayed slight yellowness; they were much injected, especially around the bodies of Malpighi; the right weighed eight ounces, and the left seven ounces.

Head.—Upon removing the scalp, the same yellow colour which was seen in the cartilages of the ribs, pleuræ, and peritoneum,

was observed in the cellular tissue, and bones when sawn through. The dura mater was yellow, and the arachnoid much injected. A section of the upper lobes of the brain did not exhibit more than the usual number of red points. Two drachms of fluid were removed by the pipette from the left, and three drachms from the right ventricle; it was of a muddy, and yellow colour. There was half an ounce of bloody serum found at the base of the brain. Upon stripping off the arachnoid from the convolutions, there were observed upon them, all over the cerebral mass, numerous pultaceous spots, with some rosy specks. The cerebrum weighed two pounds twelve and a half ounces; the cerebellum, pons Varolii, and medulla oblongata, six and a half ounces.

Case IX.—Summary.—*Admitted on the* 11*th day, during the Intermission—Relapsed on the* 13*th day—hæmorrhage from the vagina—yellowness—dyspnœa—sudden Death on the* 14*th day. On Dissection, the gall-bladder was found to contain bile, and the ducts to be pervious.*

Jane Merrilees, aged 39, servant in a Clyde Street brothel, was *Admitted 6th October, (eleventh day.)* It appears, that her present illness commenced with rigors on the 26th September, two days after which, her mistress, suspecting that it was the prevailing fever, dismissed her. She then went to lodgings in the Grassmarket, where she has been till now. She admits, that for years past, she has been addicted to habits of extreme intemperance. Some months ago, she had an attack of hemiplegia, from the effects of which she has considerably recovered. She is very weak, and either unable or unwilling to give any account of the progress of her case since the invasion of the rigors. She says, that she is better to-day than she has yet been, and has been slowly improving during the last three or four days. The pulse is 100, and small; the tongue is clean, dry, but not parched; the bowels are open; her chief complaints are of debility, and sleeplessness. She is much disturbed with the fear of death.—*Habeat horâ somni solutionis muriatis morphiæ* ℥ss, *formâ haustus.—Habeat spiritus communis* ℥iv, *formâ* "*toddy.*"

8*th October*, (*thirteenth day.*) She got the morphia draught at 10 P.M., but has slept none, and feels worse to-day. She is

troubled with urgent fits of dyspnœa, some diarrhœa, and pain of the abdomen. The tongue is brown, and moist; the pulse is 96, weak, and small; there is no headach; there is profuse hæmorrhage from the vagina; she states, that the menses appeared, and disappeared naturally, a fortnight ago. The skin has become yellow.—*R. misturæ cretæ* ℥vi, *tincturæ opii* ℥i. *Misce: Sumat* ℥i *post singulam liquidam dejectionem.—R. alcoholis ammoniatæ* ℥i. *Sumat gtt. xx urgente dyspnœa.—Habeat, horâ somni, enema amyli cum solutionis muriatis morphiæ* ℥i.—*Continuatur spiritus communis.*

9th October, (*fourteenth day.*) During yesterday afternoon, the yellowness increased somewhat, but she seemed as well as at the forenoon visit. In the evening, she had some delirium. The ammoniated alcohol, which had relieved the dyspnœa considerably, being finished, a tea-spoonful of the tincture of valerian, belonging to a neighbouring patient, was given about 4 P.M. to allay an alarming paroxysm of dyspnœa, and it apparently did so. She complained much in the evening of a sense of suffocation, and with difficulty swallowed her toddy. Ten minutes before her death she was pretty well, and entered into coherent conversation with the nurse upon indifferent topics. She died at half-past three this morning, during a paroxysm of dyspnœa.

SECTIO CADAVERIS, 10*th October*, 2 P.M.

External Inspection.—The body, which was found plump and fat, did not exhibit the yellowness more distinctly than during life. There was great lividity of the countenance, and of the anterior part of the body, as far down as the clavicle; livid patches were also seen all over the body.

Internal Inspection.—Thorax.—Both lungs were healthy. The right lung weighed one pound two ounces; and the left fourteen ounces. The heart weighed ten and a half ounces, and was natural as to size, and firmness of texture. On dividing the great veins at the root of the neck, a large quantity of very fluid, and very black blood escaped.

Abdomen.—On the inferior part of the anterior surface of the liver, two large white patches of thick and dense lymph were observed: the organ itself had a nutmeg appearance, was very dense, and weighed five pounds eight ounces. The gall-bladder was filled, but not distended with bile. The spleen was greatly enlarged, very soft, and weighed one pound seven ounces. The

splenic, mesenteric, and portal veins were full of fluid blood. The duodenum was congested; the other intestines were not examined, circumstances having abruptly terminated the autopsy. The uterus was intensely congested, externally and internally. There was much ovarian and uterine disease.

Head.—The brain was unfortunately examined only in a hasty and cursory manner; nothing abnormal was seen, except unusual vascularity of the arachnoid.

Case X.—Summary.—*Epistaxis on the 6th, yellowness on the 7th, symptoms of delirium tremens on the 9th, purple spots on the 11th; and sudden Death on the 13th day. Treatment; stimulants, with calomel and opium.—No Autopsy.*

William Brunton, house-painter, a native of Edinburgh, and resident in it from his birth, at present living in Blackfriars Wynd, aged 32, single, robust, with dark hair and eyes, was *Admitted, 1st October* 1843, (*fifth day*). He states, that he is much addicted to habits of intemperance, that during the last three months he has had no employment, and very scanty aliment.

He was seized, on the afternoon of the 27th September, with rigors, which continued, with a general feeling of cold, till the evening, when he went to bed, and sweated profusely, without any relief to the headach and general soreness, with both of which he was oppressed from the commencement of the rigors. On the night of the 29th, he again sweated a good deal, without any relief. On the 30th, he had, for the first time, general pains, especially in the joints, and prostration of strength. He has never been entirely confined to bed, until admission into the hospital, and yesterday, he was in the streets all day. He is not aware of having been exposed to contagion.

The expression seems to be natural, exhibiting perhaps slight depression; the countenance is florid, and in no degree either purple or bronzed; the pulse is 112, full, bounding, and not very easily compressed; the tongue is moist, and coated with a white fur; the bowels are open; the headach slight, except when he coughs; the intellect is clear; the muscular power is much depressed. He complains of want of sleep, and some cough at night, a slightly vitiated taste, and general pains. The conjunctivæ are

much injected, his voice is hoarse, and his throat a good deal inflamed.—*Let the throat be enveloped in a hot wet cloth, external to which let another dry one be applied; let both remain on for twenty-four hours.—Habeat troch. ipecacuanhæ et morphiæ lx. Sig. To be be used when the cough is troublesome.*

2*d October*, (*sixth day*). He feels, and looks in every respect better. The florid appearance of the countenance is less intense, but there is no decided bronzing as yet. The hoarseness, and uneasiness in the throat speedily ceased after the applications ordered had been made; and he now feels his throat perfectly cured. Upon examination, it appears, that the inflammation does not now exist. He slept pretty well during the night, being little troubled by cough, which indeed has not annoyed him much since he began to use the lozenges. About seven this morning, epistaxis began, and continued till now, (half-past 11 A.M.), when it seems to have ceased; some relief has followed the epistaxis. He states, that, when in health, he is subject to epistaxis, but that he never had it to the same extent, as on the present occasion. The tongue is moist, and not more coated than yesterday; the bowels have not been opened since admission; the pulse is 98, and of natural strength.—*Habeat enema purgans.*

3*d October*, (*seventh day.*) The enema operated freely, and gave relief. The respirations are 36 in the minute; the pulse is 112, and of moderate strength; the tongue is moist, and coated with a yellow fur. There is a yellow, or saffron colour, of considerable intensity, pervading the forehead, face, chest, and abdomen; it extends to the knees, where it all at once greatly diminishes in intensity, and upon the legs is faint, and on the feet invisible; upon the arms and forearms, it is more distinct than on the legs, but less so than on the chest and abdomen; upon the hands it can be seen, but is there exceedingly faint.—*Habeat pil. calomel. et opii vi. Sumat unam quartâ quâque horâ.—Habeat spiritus communis ℥vi. Sumat semiunciam secundâ quâque horâ, formâ "toddy."*

4*th October*, (*eighth day*). He rested pretty well during the night; the intensity of the yellowness has greatly diminished; the respirations are 26 in the minute; the pulse is 92, and of good strength; he has taken six ounces of the whisky in toddy, and three of the pills, as directed; the urine is scanty, and in

appearance resembles muddy porter; he has had occasional fits of delirium, with some violence; at present, he is incoherent, and since this report was commenced, he has made several attempts to get out of bed. He has a good deal of tremor, restlessness, and subsultus tendinum. He keeps up an almost incessant conversation, in a low muttering tone, with individuals by whom he imagines himself surrounded.

5th October, (*ninth day.*) He has more restlessness, subsultus tendinum, and delirium; and has slept none since yesterday; the yellowness is somewhat less distinct; he has, at present, slight recurrence of the epistaxis. From neglect on the part of the nurse, he has only had one more of the pills since yesterday; that is to say, in all he has only had four of the calomel and opium pills.—*A calomel and opium pill has just been administered.—Habeat pilulam calomelanos et opii, tertiâ quâque horâ.*

6th October, (*tenth day.*) Soon after the visit yesterday at noon, he fell asleep, and slept till midnight, when he awoke, feeling much better. At present, he is lying upon his back, slumbering and moaning; the pulse is 86, firmer, and quite regular; the tongue is moist, excepting in the centre, where there is a brown and parched longitudinal streak; he complains much of thirst; since yesterday, he has had three black stools; the urine has the same appearance as when last reported; the yellowness is slowly going off; there is very little incoherence, and less subsultus tendinum.—*Let him have no more of the calomel and opium pills till ten this evening, when he is to get another.*

Vespere. He has had the pill. He remains much as he was at the noon visit, except that the pulse is decidedly weaker.—*R. mist. camphoræ ʒiss, sol. mur. morphiæ ʒiij. Misce. Sumat ʒss secundâ quâque horâ, donec dormiat.—Continuatur "toddy."*

7th October, (*eleventh day.*) He slept none during the night; has had no violence, but incessant low muttering delirium, with subsultus tendinum; and this is the state in which he lies at present. The yellowness has not diminished since yesterday; and from there being less of the purple in his cheek, it is more striking to-day; the stools have greatly lost the pitchy appearance of yesterday, but are still very dark-coloured; the pulse is 88, weak and tremulous; the respirations are 25 in the minute; the diaphragm descends freely; the tongue is parched, and stiff. On the

chest and abdomen, there are some purple, irregularly formed, and sparsely scattered, spots. The nurse states, that there is a white sediment in the bottom of his urine; the urine itself is now of a brown colour. He has had seven ounces of whisky since the noon visit yesterday; he began taking the camphor and morphia mixture at 10 P.M., and has had three doses of it.—*To resume the calomel and opium pills, taking one every four hours, till noon visit to-morrow.—Increase the whisky to ten ounces.—Omit the mixture of camphor and morphia.*

10 P.M. He is much in the same state as at noon. The pulse is of good strength.—*Continue the whisky, and the pills.—To have a blister applied to the head for three hours.*

8th October, (*twelfth day.*) He continued during the night as when seen at 10 P.M. The bowels have been opened this morning once, and the same pitchy-looking matter passed as formerly; the pulse is 108, weaker than at the visit last night; the pupils are contracted; he lies on his back in a slumbering state, moaning, and making a gurgling noise in the throat.—*Omit. pilulæ.—Contin. spiritus communis.*

9th October, (*thirteenth day.*) He continued in the same state during the night, with the addition of more restlessness. He rose unassisted three times to stool, which ought not to have been, and which is, in such cases, always forbidden; at each time, he had a black stool, the last, however, being not so dark as the two former. He got his spirits regularly. The last time that he rose was at five minutes to six this morning, when he got up with as much activity as on the previous occasions; he had scarcely been put to bed, when he expired. He died at 6 A.M. Had this man been properly watched by the nurse, death would not have taken place so early, and in the manner in which it occurred.

An autopsy was refused by the relations, which is much to be regretted.

CASE XI.—SUMMARY.—*Admitted on the 9th day, during a remission—yellowness on the eleventh day—black altered blood issuing from the rectum—Treatment; stimulants, and blue pill—Death on the nineteenth day; no autopsy.*

David Matheson, residing in Stockbridge, aged 57, married,

with brownish grey hair, blue eyes, by occupation a gardener, born in Edinburgh, where he has always lived, was

Admitted 7th October 1843, (*ninth day.*)—He states, that for some time past, he has been in poor circumstances, subsisting upon precarious means. He is not aware of having been exposed to contagion.

On the 29th September, he was seized with rigors, headach, severe pains in the back and limbs, and a feeling of great lassitude. He afterwards became hot, but did not sweat any till the night of the 5th October (*seventh day*), when he perspired profusely, and has felt considerably better ever since. He was easier to-day than he has been since the invasion of the disorder, but the removal from home has greatly fatigued him; and unfortunately, to add to his exhaustion, he was made to walk down to this hospital from the Infirmary waiting-room, in place of being conveyed in a chair.

The countenance is deeply depressed and purple; the pulse is of tolerable strength, the tongue is dry and rather brown, the bowels are open, the intellect is clear, and his only complaints are of debility, slight headach, and sleeplessness at night.—*Quiescat.*

8th October, (*tenth day*).—He slept a little during the night; the bowels are open; the pulse is 108, and of good strength; the tongue has become moist, and assumed a dirty white fur; he has frequent short dry cough, but no pain in the chest; he makes no complaint.

9th October, (*eleventh day*).—Yesterday afternoon, he was observed by Mr Reid to have a slightly yellow aspect. At present, the neck, chest, and part of the face, have a deep saffron colour; in the countenance, the deep purple and yellow colours struggle for the mastery; the forehead is yellow, the upper parts of the cheeks are purple, and around the mouth, and on the chin, the colour is saffron; these colours do not gradually pass into one another, except at one or two points, but stop abruptly, forming a striking contrast; there is no yellowness of the sclerotics, and superior or inferior extremities; the tinge on the chest, back, and abdomen is just sufficient to be detected. He slept a good deal during the night, but moaned much, as if in pain; at present, he is easy; the pulse is 96, and rather weaker than yesterday; the tongue is brown and moist; the bowels are confined.—

Habeat vini rubri ℥iv, formâ "negus."—Injiciatur enema domesticum statim.

10*th October*, (*twelfth day.*)—He raved and moaned a great deal during the night, but this morning makes no complaint; the countenance has become much more collapsed, and now exhibits much more of the purple than of the yellow; on the other parts of the body, the yellowness is much deeper than yesterday. Upon contrasting the degree of vividness of the yellow in different parts of the body, it appears to be most intense around the lips, eyes, and ears, and on the neck, down to the clavicles; it exists in a slightly less degree on the chest, arms, abdomen, and thighs; beyond the knees and elbows, it is very faint; it is a shade deeper on the fore-arms, than on the legs; the yellowness of the conjunctivæ has become very marked. The pulse is 96, full, and not very compressible; the tongue is stiff, parched, slightly coated, and of a rusty brown colour; the bowels have not been opened since the evening of the 8th; he complains much of thirst, and pains through the whole body, but especially in the shoulders and knees.—*Sumat statim pilulas hydrargyri ij; et vespere, enema cum olei ricini ℥ij.—For drink, to have cold beef tea.—Vinum ad ℥vj, ℥ viceiv.*

11*th October*, (*thirteenth day.*)—A good deal of black matter was evacuated by the assistance of the enema; the countenance is still more depressed than yesterday; the pulse is 76, and feeble; the yellowness continues the same; he slumbers constantly, but is easily roused to answer questions, which he does quite rationally, though during his sleep or slumber he has some muttering delirium; he has a strong harsh voice, which he frequently exerts in calling upon the nurse to give him his hourly dose of negus. He refuses to take the beef tea, and will admit nothing but the negus within his lips.—*A blue pill has just been administered with some difficulty.—Omittatur vinum; et habeat spiritus communis ℥viij, formâ "toddy."*

Vespere.—He looks worse, and has passed several semi-liquid black stools in bed; most of his urine during the last two days has been passed in bed, but a little collected since the visit in a urinal, and now under observation, has the same porter colour which has been met with in most of the yellow cases.

12*th October*, (*fourteenth day.*)—The countenance has im-

proved; the pulse is stronger; and the yellowness much diminished.—*Continuatur spiritus communis, formâ "toddy."*

13*th October*, (*fifteenth day.*)—The countenance is more dejected; he has had a good deal of disturbed sleep since yesterday; the pulse is 88, and of the same strength as yesterday; the yellowness has entirely left every part of the body, excepting small spaces around the eyes and ears; both cheeks are deeply purple; he has had no stool since the 11th; he passes his urine in bed. During the last twenty-four hours, he has taken eight ounces of whisky, in the form of hot toddy, and also a good deal of beef tea, both cold and hot.—*Two blue pills are now administered, being the first medicine of any kind which he has taken since the* 11*th.*

14*th October*, (*sixteenth day.*)—In appearance and strength, he seems to be very much as yesterday. He passes his urine and stools in bed. On examining the latter, they appear to consist entirely of altered blood, and are identical in appearance with the black vomit in the case of James Law. He will not speak, except to call for his toddy, which he does frequently, and strongly. In general, he lies upon his back, moaning much; and when any attempt is made to move him he roars loudly, as if suffering from muscular and articular pains.—*Habeat spiritus communis* ℥*x, vice* ℥*viij.*

15*th October*, (*seventeenth day.*)—The symptoms continue much as yesterday, but he is certainly worse. He has raved none for forty-eight hours, and slumbered much. The whole of his whisky has been administered.—*Continuatur spiritus communis.*

16*th October*, (*eighteenth day.*) The matter formerly described as similar to the black vomit, seems to be constantly running involuntarily from the rectum; the quantity passed is very great. He is rapidly sinking; the pulse is small, intermittent, and about 100, as nearly as it can be counted. The extremities are warm. —*Continuatur spiritus communis.*

17*th October*, (*nineteenth day.*) Since the foregoing report was made yesterday at noon, he continued to sink till 10 A.M. to-day, when he died. Till the time of his death the black matter continued to issue in abundance from the rectum.

The relatives refused to permit an autopsy, which cannot be sufficiently regretted.

CASE XII.—SUMMARY.—*The fever masking phthisis.—Purple countenance.—Death from diarrhœa on the 24th day.—On Dissection there was found disease of the lungs, ulceration of the bowels, and black patches on the rectum.*

Mrs Morris, aged 45, (but more like 65,) residing in Morrison's Close, thin, pale, and of phthisical appearance, was

Admitted 21*st September* 1843, (*sixth day.*) She states, that her general health is bad, that she occasionally drinks too much whisky, that she has had seven children, and three abortions. The epidemic fever is in her family.

She took ill on the 16th September, but cannot give a distinct account of the order in which the symptoms appeared; but says, that during the first twenty-four hours she suffered from headach, general pains, nausea, great debility, intense thirst, and sleeplessness. She got an aperient from a dispensary pupil.

There is much bronzing. She has felt rather better during this, than during the preceding five days. The pulse is 120, and rather feeble; the tongue is coated with a faintly yellowish fur; she has much thirst; and has had diarrhœa during the last three days; there is no eruption on the skin; she has much headach; the intellect is clear; and her chief complaints are of abdominal, muscular, and articular pain, deafness, and debility; there is no cough; the abdominal pain is general, and from its being relieved by firm pressure, may probably to some extent be muscular. A very distinct Turner's line extends from the ensiform cartilage to the pubis. Her last child was born nine years ago. The catamenia ceased two years ago, since which time she has had leucorrhœa; this has been more profuse than ordinary for the last three or four days.—*R. misturæ cretæ* ℥*vi, tincturæ opii* ℥*i. Misce. Sumat* ℥*i post singulam liquidam dejectionem.—R. acetatis plumbi* ℈*ij, pulveris opii gr. iv, aquæ* ℥*viij. Fiat lotio: Utatur tepidâ ter in die*

22*d September*, 4 P.M., (*seventh day.*) The pulse is 150, and very full; she is bathed in perspiration; she was not sweating when seen at 10 P.M.; the diarrhœa is gone, and she is very feeble.—*Habeat vinum ad* ℥*iij, formâ* "*negus.*"

9 P.M. She has had the wine at intervals, to the extent of three ounces. The pulse is 96, and very compressible; the expression is very depressed; the skin is covered with a cold clammy perspiration; the tongue is moist, and black, as if smeared with black currant jelly; there is much thirst; and great deafness.—*Continuatur vinum.*

23*d September*, 9 P.M., (*eighth day.*) Being asleep, she was passed at the noon visit. She has dozed a good deal during the day, and is considerably less depressed in countenance than yesterday; the pulse is 66, of better strength, but still very feeble; the tongue is as yesterday; the skin is cool and dry; the bowels have been opened twice, the evacuations being formed, and feculent.—*Continuatur vinum.*

24*th September*, *half-past* 2 P.M., (*ninth day.*) She has had a good night; the countenance is improved; the pulse is 78, and of better strength; there has been one stool; the bronzing is now very apparent.—*Continuatur vinum.*

25*th September*, (*tenth day.*) There is some slight improvement since yesterday.—*Continuatur vinum.*

27*th September*, (*twelfth day.*) For two days past, she has been improving, sleeping well during the night, and slumbering a good deal during the day. She has neither sweatings, diarrhœa, nor cough.—*Continuatur vinum.*

28*th September*, (*thirteenth day.*) She is still improving, but was much disturbed with cough and dyspnœa during last night; the bowels are confined.—*Admoveatur statim sinapisma pectori.* —*Sumat trochiscas ipecacuanhæ et morphiæ urgente tussi.*— *Habeat, horâ somni, solutionis muriatis morphiæ gtt. xxx, formâ haustus.*

29*th September*, (*fourteenth day.*) She makes no complaint, and is gaining strength rapidly.—*Continuatur vinum ad ℥iv, vice ℥viij.*

2*d October*, (*seventeenth day.*) She continued improving till last night, when she was seized with slight rigors, and sudden loss of the strength which she had regained. The bowels are open; the countenance is purple.—*Habeat vini rubri ℥viij.*

3*d October*, (*eighteenth day.*) She slept well, but the countenance is more purple, and depressed than yesterday; the pulse is

124, small, and thready; the tongue is clean, and moist; the bowels are rather loose; she has a good deal of cough, with copious expectoration of white frothy mucus.—*Continuatur vinum.—Habeat, horâ somni, enema amyli, cum solutionis muriatis morphiæ ℥i.*

4th October, (*nineteenth day.*) The general appearance is rather improved; though the diarrhœa has returned, and the pulse continues extremely feeble; the tongue is clean and moist. The enema was administered last night.—*Sumat tincturæ opii gtt. xv, quartâ quâque horâ ad tertiam vicem.*

5th October, (*twentieth day.*) She has had three doses of the laudanum, and no return of the diarrhœa. She says, that she feels much better, and the countenance is certainly improved, but it is to be feared, that the apparent amendment is the temporary effect of the laudanum.—*Quiescat.*

7th October, (*twenty-second day.*)—The diarrhœa has returned.—*Sumat decocti hematoxyli ℥i, tertiâ quâque horâ.*

8th October, noon, (*twenty-third day.*)—Three doses of the decoction of logwood have been taken, and a starch enema with sixty drops of laudanum administered, with very little relief to the diarrhœa. The countenance is much depressed; and the pulse is small and weak.

9th October, (*twenty-fourth day.*)—Since the visit at noon yesterday, she had only one scanty, black stool. She continued, nevertheless, to sink, and died this morning, at half past 12 o'clock, having retained to the last her consciousness of approaching dissolution.

SECTIO CADAVERIS.—*10th October*, 3 P.M.

External inspection.—The countenance has a blue, shrunk appearance, and on various parts of the body are livid patches. Turner's line is not quite so distinct as during life. A portion of the integument, in the situation of the line, having been removed, was subjected to a microscopic examination by Professor Allen Thomson, who could discover nothing except a staining of the cuticle.

Internal inspection.—Thorax.—The right lung adhered firmly throughout, to the costal pleura, contained tubercles in various stages, and in the upper part of the left lobe, a large abscess;

it weighed one and a half pounds. The left lung is also firmly, but less extensively adherent to the costal pleura; it is much healthier than the right, and the few tubercles which it contains in the upper part, are in an early stage; its weight is one lb. one oz. The heart is soft, and flabby; its weight is seven oz. All the vessels in the chest and neck poured forth an unusually large quantity of fluid blood, when cut into.

Abdomen.—The gall-bladder is full of black, inspissated, and very tenacious bile. There is bile, and feculent matter in the intestines. The liver, with the gall-bladder and its contents, weighed three pounds nine ounces. The small intestines were highly injected, but upon a careful scrutiny, no ulcers could be detected on the mucous coat. On the mucous lining of the transverse arch of the colon, there is an ulcer, of the size of a kidney bean, and two others, as large as split peas. There were no ulcers in the rectum, but several black patches, which owed their colour in part to the matter contained in this bowel, and also, to the sub-mucous exudation of blood. The black matter was apparently altered blood.

CASE XIII.—SUMMARY.—*Admitted on the twelfth day, during a remission—Appearance of yellowness on the eighteenth day—Death on the twenty-third day. No autopsy.*

Michael Dowlands, coachmaker, aged 42, married, resident in Edinburgh for the last twelve years, and now living in the Grassmarket, of ordinary development, with brown hair, and blue eyes, was

Admitted, 7th October, (twelfth day.) On the 26th of September, he was seized with shivering, headach, and pain in the neck. He has had no pain in the back; he vomited some, from medicines taken by the advice of a dispensary pupil; the bowels have been kept open by aperient drugs. He states, that he has not had regular work, but upon the whole, a sufficient supply of food.

His expression is natural; the pulse is of good strength; the tongue is clean; there is a good deal of thirst; the bowels are open; there is no eruption of any kind on the body; the headach is pretty severe; he has a bad taste in the mouth; the muscular power is very weak; and the general pains are very severe. He

states, that he feels much better now, than he was some days ago.—*Quiescat.*

9*th October*, (*fourteenth day.*) He slept pretty well during last night, and feels better; the bowels are opened; the pulse is 108, of good strength; the skin is hot, and dry; he complains of muscular pains in the abdomen on breathing; also, of pains in the limbs.—*R. sulph. quininæ* ℈*i, infusi gentianæ* ℥*iv. Misce. Sumat* ℥*i, sextâ quâque horâ.*

11*th October*, (*sixteenth day.*) Since last night, he has had some diarrhœa; nevertheless, he is improving in other respects. —*R. misturæ cretæ* ℥*ij, tincturæ opii camphoratæ* ℥*j. Misce. Statim sumat.*

12*th October*, (*seventeenth day.*) The bowels are natural; he slept well; and continues improving.

13*th October*, (*eighteenth day.*) His tongue is moist, and slightly coated with a yellow fur; the pulse, and skin are natural; he has some headach; there is a slight return of the diarrhœa. Since yesterday, slight yellowness has appeared in the countenance, and at present, covers it, and the anterior part of the neck, extending as low down as the clavicle.—*Repetatur mistura cretæ, cum tincturâ opii.—Omittatur mistura quininæ.*

15*th October*, *noon*, (*twentieth day.*) In consequence of the depressed state, in which he was found yesterday at noon, six ounces of whisky were ordered, all of which has been taken in the form of toddy. During the last few days, he has certainly lost ground. The pulse is 100, full, and easily compressed; the respirations are 34; he has pain in the chest, and some loose cough; the yellowness is less intense; he changes colour frequently, and suddenly; he has pain in every part of the body.—*Habeat enema amyli, cum solutionis muriatis morphiæ* ℥*i, horâ somni. —Applicetur vesicatorium pectori* 4×5.

16*th October*, (*twenty-first day.*) There is some slight improvement in every respect, although he has had no sleep since yesterday.—*Continuatur spiritus communis.—Habeat, horâ somni, solutionis muriatis morphiæ gtt. xxx, formâ haustus.*

17*th October*, (*twenty-second day.*) His appearance is rather better than yesterday; he had several short sleeps during the night; he refused the draught; he raves a little at intervals, but at present, answers questions rationally; the bowels are loose;

he has taken several doses of chalk mixture.—*Continuentur mistura cretæ, et spiritus communis.*

18*th October*, (*twenty-third day.*) Yesterday, at five o'clock P.M., he was to all appearance as at noon, slowly mending, and took some panada, along with his toddy. At midnight, he became restless, and raved a good deal. In this state, he continued till five this morning, when he ceased speaking, and died shortly afterwards, having gradually become comatose.

CASE XIV.—SUMMARY.—*Yellowness; pain, and dulness over the liver.—A mild Relapse on the* 15*th day.—Restoration to health.*

William Robinson, aged 35, a native of Edinburgh, unmarried, by trade a smith, in partial employment during the last few months, often pinched for food, and occasionally intemperate, was

Admitted, 12*th September*, *(fourth day.)* He is of spare, but strong make; has black hair, dark eyes, and a sallow complexion. He has been lately living in Richmond Street, in a stair where there is much fever. He had fever in Queensberry House Hospital some years ago.

He took ill on the 9th, with severe headach, and pains in the back and legs, some sweating, a good deal of cough, much thirst, but no rigors. Since then, he has slept little.

On admission, he is found to have severe headach, gene ral pains, much thirst, a white moist tongue, and a hot, dry skin; the bowels have been twice opened by medicine taken last night; the pulse is 132, and soft; he has a good deal of cough, with expectoration; and is very deaf.—*Applicentur hirudines viii temporibus.—Habeat pulveres effervescentes.*

13*th September*, *(fifth day.)* The leeches bled well, but without relief to the headach. He has some abdominal tenderness. —*Abradatur capillitium, et applicetur aqua frigida toto capiti.— Admoveantur hirudines viii epigastrio.—Habeat olei ricini ℥i, et sol. mur. morphiæ ℥ss, formâ haustus.*

14*th September*, (*sixth day.*) He slept pretty well during the night. Since the head was shaved, the headach has been less severe. The bowels are open; the tongue is dry in the centre, and moist along the sides; he has much thirst; the pulse is 88, of good strength; the cough and expectoration continue; there is considerable

lachrymation; he complains of pain in the region of the liver; there is distinct yellowness of the sclerotics, and skin of the neck and abdomen.—*Quiescat.*

15*th September*, (*seventh day.*) The yellowness has become much more decided since yesterday; the whole surface of the body has now a golden aspect, excepting below the knees, where the tinge is much less distinct; the yellowness of the sclerotics is very deep; the pupils are contracted; and the eyes are suffused. This morning, about ten o'clock, in consequence of urgent complaint of pain in the region of the liver, and pit of the stomach, ten leeches were applied, which bled well, and have afforded great relief. There is still, however, much pain, caused by pressure over a space of some inches in extent, between the mesial line and the cartilages of the false ribs on the right side, as well as a general soreness on pressure over the whole region of the liver. There is no pain or fulness in the region of the spleen. The urine is high-coloured. The bowels have been opened four times; the evacuations are black, fluid, scanty, and fœtid. The tongue is covered with a tenacious yellow fur; there is much thirst. The skin is soft, and of natural temperature. He has a short tickling cough, unaccompanied by any pain in the chest, but which aggravates the abdominal pain and headach, by shaking the body. The pulse is 60, full, and compressible.—*To have the head diligently kept cool, by a lotion of the muriate of ammonia: and the abdomen to be fomented.—Injiciatur enema domesticum.—Habeat vomitum sulphatis zinci gr. xii, ex aquæ tepidæ ℥viij, statim. Habeat vini rubri ℥iv; to have two ounces made into negus, immediately after the operation of the emetic; and the remainder at sleeping-time.*

9 P.M. There was copious vomiting of green and brown matter from the emetic; and he says, that he has felt much better since. The yellowness seems to be less distinct; but, from the imperfect light, it is impossible to be certain on this point. The abdominal pain has almost entirely left him. The pulse is 118, and feeble; some hours ago, it was not more frequent than at the noon visit. He did not get the negus till now.—*Ht. pil. calomel. et opii unam statim, et repet. cras mane.—Ht. haust. c. sol. mur. morphiæ gtt. xxx, h. s.—Injic. enema amyli c. sol. mur. morph. gtt. xxv, cras mane.*

16*th September*, (*eighth day.*) He feels better, and is much im-

proved in appearance since yesterday forenoon. He got the medicines which were ordered yesterday; but has slept none. The yellowness of the countenance is less intense, but remains as vivid as formerly, on the other parts of the body. One of the leech-bites has continued bleeding, and part of his bed-clothes and bedding are soaked with blood from it. It has now been checked by the application of the nitrate of silver, and the pressure of adhesive plaster. The abdominal pain has almost entirely left him. He had one scanty stool this morning. The pulse is 78, and much improved in strength. The tongue is coated with a yellow paste in the centre, but is cleaning at the sides. He has had slight epistaxis for the last eight hours, which seems now to have ceased. He has had five ounces of wine as negus, since yesterday.—*Continuatur vinum ad ℥vi.—Continuentur pilulæ calomelanos. Habeat haustum cum sol. mur. morphiæ ℥i, horâ somni.*

7 P.M. He feels better than at the noon visit. The leech-bite, which was bleeding in the morning, has not bled any more since the application of the caustic, but there has been a good deal of hæmorrhage from another; around all of the leech-bites, there are large patches of ecchymosis. The pulse is 78, regular, and of moderate strength; the tongue is moister, and cleaner than in the morning, and is partially covered with a dark brown, instead of a yellow paste; the urine is scanty, and resembles dark muddy ale in colour; he has had some return of the epistaxis, but no headach, abdominal uneasiness, or general pains; he hears more readily than in the forenoon. He has had wine negus twice.

17*th September*, (*ninth day.*) He slept well, but looks more collapsed than yesterday, and complains of confusion of ideas. His eyes have a keen, inquiring expression. The yellowness of the countenance seems to be still diminishing, and it is also less on the abdomen, but is more perceptible than formerly on the legs. There is no pain in any part of the abdomen, either on coughing, or from firm pressure of the hand. The leech-bites have not bled since last report, but there has been considerable epistaxis, and, according to his own statement, some hæmoptysis. The pulse is 98, and of good strength. He is inclined to sit up in bed, and does so for some minutes at a time, without any feeling of exhaustion. The bowels are regular; the urine is less

turbid than it was yesterday, but it has the same colour; there is some abdominal distension.—*Continuatur vinum.—Habeat pilulam calomel. et opii, ter in diem.—Intermittatur haustus horâ somni.*

18*th September*, (*tenth day.*) He passed a good night, and is very much improved in appearance. He has no confusion of ideas. The yellowness has almost disappeared from the face, fore-arms, and hands; but, although it has also much faded on the other parts of the body, it is still quite visible; in the sclerotics, it is decidedly less. The skin feels natural; the tongue is moist, and much cleaner, but on some parts, has a dark paste; his bowels have been twice opened, since the visit yesterday; the pulse is 84, small, and regular; there has been no more bleeding from the leech-bites, nor epistaxis.—*Continuentur omnia.*

19*th September*, (*eleventh day.*) His bowels have been once opened; the tongue is moist, and cleaning; there is less thirst; the pulse is 88, of good strength; the skin is cold.

20*th September*, (*twelfth day.*) He is going on well. There is no abdominal pain; but there is a very faint dark streak on the skin, extending from the umbilicus to the pubes. The mouth is not affected by the pills, which he has taken regularly. He has a good deal of cough.—*Omittantur pilulæ.—Utatur linimento opiato.*

21*st September*, (*thirteenth day.*) He slept well, and feels better. The yellowness has left the surface, and the sclerotics. The tongue is slightly furred, and moist; the countenance is natural; the deafness has increased; pulse 72, of good strength; he makes no complaint of pain in any part; the dark abdominal line is broader, but less defined than yesterday; the cough is much less. —*Quiescat.*

22*d September*, *(fourteenth day.)* Goes on improving; the dark line is seen faintly extending between the pubes and the ensiform cartilage; the appetite is very good.—*To have porridge in the mornings, as he dislikes the tea.*

23*d September*, *(fifteenth day.)* He is improving; and has been taking no medicines, excepting the wine, since the 20th.—*Quiescat.*

24*th September*, (*sixteenth day.*) He has not been so well since yesterday evening; he slept ill last night; the pulse varies from 100 to 120, and is deficient in strength; the tongue is moist, but covered with a thin white fur; to-day, and for some days past, there has been more deafness; the bowels have been opened

thrice since last night; he has some dry cough.—*Habeat troch. ipecac. et morph. xxv.*

25*th September*, (*seventeenth day.*) The pulse is as yesterday, but more irregular. He slept none during the night, but a little this morning. He has not had the lozenges, is much troubled with cough, and has a good deal of white frothy expectoration. At present, he complains of some cold, with slight rigors, which, he says, he has always more or less of at this time of day, (between twelve and one o'clock.) He feels no pain in any part of the body, except a slight headach, which he attributes to the cough. The bowels are open.—*To take one of the ipecacuan and morphia lozenges occasionally; and a draught, with thirty drops of the solution of muriate of morphia, at night.*

27*th September*, (*nineteenth day.*) He goes on improving.—*To have rice diet.*

1*st October*, (*twenty-third day.*) Since last report, he has been going on well, and now makes no complaint, except of debility, and general pains. He is allowed to rise to-morrow.—*R. extract. gentianæ ʒi. Ft. pil. xij. Sumat unam, quartâ quâque horâ.*

5*th October*, (*twenty-seventh day.*) He has been up during the greater part of each day, since the 2d, and has gone on steadily improving. He makes no complaint of weakness of the limbs, and the general pains have ceased. The appetite has returned. —*To have full diet.*

9*th October*, (*thirty-first day.*) He is dismissed, at his own request, without any remaining symptoms of the fever, except some remaining weakness, and slight œdema of the ankles.

1*st November.*—Since the patient left the hospital, he has gained but little strength, and when seen to-day at his house, was labouring under general dropsy, apparently independent of organic disease, and solely caused by debility. He has been managing himself very ill, and has had little good food.

Case XV.—Summary.—*In the first attack, (on 6th day), occurred yellowness, dark coloured urine, bilious vomiting, and delirium. Critical sweating took place on the ninth day. He relapsed on the eighteenth day. The symptoms of the former attack were repeated, with the exception of yellowness and delirium, and with*

the addition of sweating. No epistaxis or other hæmorrhage occurred in this case.—Recovery.

Dominick White, an Irishman, aged 47, married, residing in Currie's Close, Grassmarket, by occupation a labourer, was

Admitted, 27th August, (fourth day of the disease.) He states, that he has lived in Edinburgh for the last ten years. For the last twelve months, he has been only partially employed, and has had at times, insufficient aliment. He says, that he has descended from a healthy family, has always enjoyed good general health, and never had, before this attack, a disease similar to it, or any other, termed fever. His appearance is robust. He has scanty grey hair, and light eyes.

On the 24th August, at 12 noon, he was seized with rigors, pain of the head and back, and general soreness over the whole body. He has kept his bed, since the attack, till now. During this period, there has not been the slightest epistaxis, cough, vomiting, sweating, or diarrhœa; and his symptoms have been just a continuance of those which first seized him, with the addition of anorexia, and much thirst. He has been generally chilly, and has passed restless nights. On the day after his attack, he was seen by a medical gentleman, who prescribed some aperient powders, which operated freely, but without relieving any of the symptoms. His wife and family are at present convalescing from the prevailing epidemic fever.

His pulse is 100, of moderate strength; the tongue is furred, and moist; there is much thirst; the bowels were opened to-day, before admission; the temperature is somewhat increased; there is no eruption; he sleeps badly at night; the headach is severe, but his intellect is perfectly clear; he complains of a saline taste in the mouth; has no appetite; is prostrated in muscular power; and is racked with general pains; he lies best on the left side; the chest expands freely, and without pain; his respirations are twenty in the minute.—*Habeat calomelanos gr. v, horâ somni.—Etiam, pul. jalapæ compos. ℥i, cras mane.—Admoveantur hirudines iv temporibus; et abradatur capillitium.*

28th August, (fifth day.)—He feels easier to-day, and his

head is much relieved; his bowels have been opened by the medicine.—*R. sulphatis magnesiæ* ʒiij, *acidi sulph. diluti gtt. x, syrupi zingiberis* ʒi, *aquæ menthæ pip.* ℥ij. *Solve, et ft. haustus. Sumat statim.—R. tartratis antimonii et potassæ gr. i, spiritus ætheris nitrosi* ʒss, *aquæ fontis* ʒviij. *Misce. Sumat unciam tertiâ quâque horâ.*

Vespere.—During the afternoon, he sweated for about two hours, after which, he enjoyed temporary relief.

30*th August*, (*seventh day.*)—Since admission, he has slept little. The whole surface of the body acquired a decided yellow tinge, during yesterday. His pulse is 104, of tolerable strength; the tongue is moist, and coated at the centre, with a thin, dirty-yellowish paste; the bowels have been pretty open; he has twice had some bilious vomiting; the urine is scanty, and of a dark-red colour; there is no pain over the spleen, or any part of the abdomen; and during a full inspiration, the diaphragm descends freely, without causing any uneasiness.—*Habeat massæ pilul. hydrarg. gr. v, statim; et cras mane, haustus cathartici* ʒiv.

Vespere. Soon after noon, (when the above report was written,) he became incoherent, and could with difficulty be restrained in bed, so great was his propensity to wander about the ward.

31*st August*, (*eighth day.*)—He has not manifested any violence; but during the night, disturbed his fellow-patients by incessantly talking, and, when not under the observation of the nurse, leaving his bed. His eyes are at present restless. The skin has a much yellower hue than yesterday; and upon examination, it appears, that the bald scalp, neck, chest, and abdomen are the parts most vividly tinged. There is some very slight tenderness under the false ribs of the right side; but no pain is excited by pressing on any other part of the abdomen, which feels soft, and natural over its whole extent. The tongue has the same appearance as yesterday; the pulse is 104, full, and very compressible; the bowels were moved by the blue pill; the cathartic draught has been taken at present, (half past 1 P.M.) He is free from pain, excepting in the left knee-joint.—*Habeat spirit. communis* ʒviij, *formâ "toddy."—R. pilul. colocynth. comp., pilul. hydrarg. massarum āā gr. x. Misce, et divide in pilulas iv. Sumat unam, tertiâ quâque horâ.—Ht. haustum cum sol. mur. morphiæ* ʒi, *horâ somni.*

1*st September*, (*ninth day.*) Soon after the visit yesterday, he

slept for about two hours, during which time he lay on his back, breathing stertorously, and bathed in warm perspiration; after this sleep, he had a waking interval of an hour, and again fell into a slumber. He slept well during the night, after getting the morphia draught. He has taken all the spirits, made into toddy. He has at present a disposition to slumber, but is quite coherent, which he has been, with one very slight exception, since the first sleep of yesterday. There is a decided diminution in the intensity of the yellow tinge, which, however, is still deep, and striking; the tongue is cleaner, and moister than yesterday, but far back, there is still a good deal of the dirty yellow paste, formerly mentioned; his pulse is 68, soft, and compressible. His only complaint is of feebleness.—*Continuantur spiritus communis, et haustus, horâ somni.—R. massæ pilul. colocynth. comp., massæ pilul. hydrargyri, āā gr. iiss. Misce, ft. pilula, horâ somni sumenda.—Sumat haust. cathartici ℥iv, cras mane.*

10*th September*, (*eighteenth day.*) *Relapsed.* For some time past, he has been quite well, and gaining strength. The medicines and spirits were discontinued, on the day after the date of last report. This afternoon, he was seized with headach, general pains, vomiting, and sweating, which symptoms were ushered in by heat of skin, without rigors. The bowels are confined.—*Habeat enema purgans statim.*

11*th September*, (*nineteenth day.*)—He passed a restless night, from disturbance in the ward; his countenance is pale, and rather depressed; the bowels have been freely opened by the enema; he has slight general pains, but no headach. At present, he is perspiring profusely, and vomiting much.—*Ht. mist. creasoti ℥i, et repetatur post horas duas, si opus sit.*

Vespere.—No vomiting having occurred after the first dose of the creasote mixture, he did not take more of it. His linens have been shifted, since he ceased to perspire, and he now feels comfortable; the skin is moist, the countenance improved, and the expression more lively. No yellowness has appeared in the relapse.—*Quiescat.*

12*th September*, (*twentieth day.*) He feels better, and slept well till disturbed by the vomiting, which returned with severity at three o'clock, A.M., but was checked by one dose of the creasote mixture. The tongue is moist, and somewhat mottled with a

white fur. He perspired a good deal during the night. He complains of nothing but debility.—*Quiescat. Repetatur mist. creasoti, si opus sit.*

13*th September*, (*twenty-first day.*) He slept ill, but does not feel worse. The pulse is 84, and rather deficient in strength. He has had vomiting six or eight times, since the visit yesterday; the matter ejected last, which is now under observation, seems to be chiefly water, saliva, mucus of a rusty colour, and a small quantity of inky sediment. The nurse states, that what was previously thrown up differed from this in being decidedly green, but was in other respects similar. Since yesterday, he has had three one-ounce doses of the creasote mixture. He has no pain in any part of the abdomen; and the bowels are open.—*Ht. mist. creasoti* ℥*i*, *sextâ quâque horâ.—To have two bottles of soda water, and effervescing soda powders in moderation.*

14*th September*, (*twenty-second day.*) He feels, and is better in every respect; he has taken three ounces of the creasote mixture as directed, and had no return of the vomiting.—*Quiescat.—Contin. mist. creasoti, si opus sit.*

15*th September*, (*twenty-fourth day.*) He has had no return of the vomiting; the tongue is clean, and the appetite is returning. —*Quiescat.*

20*th September*, (*twenty-eighth day.*) For some days past, he has been sitting up a little. Though the tongue is a little coated to-day with a white fur, he may be said to be going on well in every respect.—*R. sulph. magnesiæ* ℥*i*, *acidi sulph. aromatici* ℥*i*, *aquæ fontis* ℥*xij. Solve. Sumat* ℥*ij ex aquâ, omni mane.—Instead of the soda water, let him have a pint of ale.*

22*d September*, (*thirtieth day.*) He feels quite well, and is daily gaining strength.—*To have full diet.*

Dismissed on 29*th September*, (*thirty-seventh day.*) Since last report, he has been in perfect health, and is now dismissed, strong and cured.

CASE XVI.—SUMMARY.—*Yellowness on the 8th day—Remission—Relapse on the 16th day, accompanied with a return of the yellowness—profuse sweating on 19th day—sudden occurrence of extreme debility on the 22d day.—Treatment; an emetic, calomel and opium, opiates and stimulants.—Recovery.*

Francis Rose, aged 37, married, of spare habit, with hazel eyes, an Italian strolling organist, arrived in Edinburgh about ten days ago, upon one of his occasional visits, was

Admitted, October 21st, (fifth day.) On the 17th October, he was seized with severe pain in the bowels, and rigors, followed by profuse sweating of the upper part of the body; he describes the perspiration, as having fallen from the face and forehead in large drops. He had no more sweating till to-day, when his skin became moist, but the perspiration was checked by exposure, on removing him to the Hospital. He has been very actively purged by a practitioner in the Grassmarket.

He states, that he is healthy, and generally of regular habits. He attributes his seizure to having visited his wife,[1] while she was a patient in this Hospital; but with what justice, cannot, of course, be determined. There is no fever in the house where he has been lodging.

The pulse is 85; the tongue is covered with a white fur; the bowels are rather confined; there is no eruption; the intellect is clear; he is free from headach; he sleeps ill at night, which he attributes to his extreme thirst.—*Sumat statim, olei ricini, ℥i.*

22d October, (sixth day.) Yesterday, some hours after admission, a slight temporary moisture came out on the skin. He slept none last night; the pulse is 100, and soft; the tongue is clean, and moist; since taking the castor oil, he has had four stools; he complains of some headach, and pain in the epigastrium, and general soreness.—*Abradatur capillitium.—Sumat tincturæ hyoscyami nigri gtt. xx, tertiâ quâque horâ, ad tertiam vicem.*

23d October, (seventh day.) He slept little last night. The pulse is 85, of moderate strength, and regular; the tongue is moist, and coated with a white fur, except at the point, where there is a red triangle with its apex pointing inwards.—*Quiescat.*

[1] For an account of her case, vide p. 16.

24*th October*, (*eighth day.*) He slept none last night. The pulse is 84, soft, and feeble. There is a dusky-orange tinge on the surface of the body; it is most intense upon the face, neck, chest, and abdomen, and gradually fades towards the knees, where it abruptly becomes much less vivid, but still continues to manifest itself in considerable intensity, nearly to the ankles; the arms present the same degree of yellowness as the inferior extremities below the knee; the transition from the deep yellow of the chest and neck, to the fainter hue of the arms, is more gradual than that observed at the knee, but may still be said to be abrupt. There is much increase of dulness in the hepatic region; and a good deal of pain is excited when pressure, either firm or gentle, is made in that situation; there is pain across the epigastrium, and also, though in a less degree, over the spleen, and above the pubis; he has considerable nausea, but has vomited only the water which he had taken, and a very small quantity of ropy mucus of a lightish brown colour; he has made water twice to-day without pain; he has had one stool, but neither the alvine nor the urinary evacuations have been kept for inspection; he complains of dryness of the mouth, and a good deal of thirst; the tongue, which is chapped and coated with a dark yellow fur, has the same appearance at the point as yesterday.—*R. sulphatis zinci gr. xv, aquæ fontanæ* ℥*vi. Misce. Statim sumat.—Habeat vini rubri* ℥*i, formâ "negus," peracta vomitione.—R. pilulas calomelanos et opii iv. Sumat unam, secundâ quâque horâ.*

25*th October* (*ninth day.*) The emetic was administered yesterday, between 3 and 4 P.M., and speedily emptied the stomach, without causing much straining, or subsequent depression. The matter ejected consisted chiefly of water. Immediately after the operation of the emetic, he got some port wine negus, which he vomited; but he retained in his stomach a small quantity given to him shortly afterwards. He felt much better soon after the vomiting ceased, and continues so at present. He has had four calomel and opium pills since yesterday. The bowels have not been opened during the last twenty-four hours; but there is no pain of any part of the abdomen, except immediately above the pubes, where there is some uneasiness, increased by pressure, and also a constant feeling of tightness; there is some tympanitic distension of the abdomen. The urine is scanty, and of a brown

colour, but not so dark as porter, and is passed with some pain and difficulty. He slept at intervals during the night, and felt comparatively comfortable, being perfectly free from pain, from which, also, he does not suffer in the least, at present. The yellowness is perceptibly less intense; the pulse is 64, soft, and regular; the tongue is much as it was yesterday; the skin is soft, and of natural temperature; the expression of the countenance is improved. He has had ʒij–iij of wine in addition to what was ordered yesterday forenoon.—*Injic. enema fœtidum, statim.—Continuatur vinum rubrum ad ʒv.—Habeat calomelanos gr. v, formâ pilularum ij, et haustum cum sol. mur. morphiæ ʒss, horâ somni.*

26*th October*, (*tenth day.*) The injection was administered, and operated four hours afterwards; he also had the calomel, as ordered. Last night, the bowels were opened once, and again, this morning; the stools, on both occasions, were fluid, of a dark-brown aspect, and bearing a striking resemblance to thick hare-soup, both in colour and consistence. The yellowness, tongue, skin, and urine, remain much as yesterday. The pulse is 74, soft, and natural. There is still a degree of tympanitis, but it has much diminished. He says, that he has a sweet taste in his mouth. His expression continues to improve.—*Injic. enema fœtidum; et habeat pil. calomel. et opii ij, vespere.*

27*th October*, (*eleventh day.*) He has slept at intervals, since last report. The yellowness is passing into a brassy bronzing; the tongue is clean, and moist; the pulse is 68, soft, but feeble; there still remains a very slight degree of tympanitis; there has been a discharge of dark-brown fluid matter from the bowels; the urine is somewhat lighter in colour.—*Augeatur vin. rubrum ad vi.—To have beef-tea.*

28*th October*, (*twelfth day.*) He has gone on improving since yesterday. The countenance is rapidly becoming bronzed.—*Habeat pil. calomel. et opii i, vespere.—Habeat olei ricini ʒi, horâ somni.*

30*th October*, (*fourteenth day.*)—He has improved considerably since last report. The bowels were moved yesterday, by the castor oil taken the preceding night; and this morning, he had a stool naturally. The countenance has a dirty coppery appearance; the expression is tranquil; the skin is soft, and natural. The yellowness of the surface of the body is extremely faint, but still

quite apparent; while it has entirely left the conjunctivæ. The pulse is 58, soft, and rather compressible; the tongue has a greyish colour, owing to being slightly coated with fur, and feels clammy, rather than moist. He has had neither sweating nor diarrhœa, since admission.—*R. sulph. quininæ gr. xxiv, extracti gentianæ lut. q. s. ut ft. massa, in pil. xxiv dividenda. Sumat i, ter in diem.*

1*st November*, (*sixteenth day.*) During yesterday afternoon and last night, he felt cold, and shivered; he had also much headach, and vertigo, which latter he feels at present. He has had no sweating; the yellowness has become more marked; the pulse is 100, firm, and regular; the tongue is coated with a grey adhesive paste; the bowels are confined; there is much thirst; great heat of skin; and general pains.—*Intermittantur pilulæ sulph. quininæ.—Habeat pil. hydrargyri, sextâ quâque horâ.—Injic. enema domesticum, cras mane.*

2*d November*, (*seventeenth day.*) He slept a little during the night. The countenance is rather more dejected than yesterday. The yellowness is considerably diminished; but is still deeper than it was before the relapse. This morning, he had two dark-coloured stools, feculent, but not formed; the urine has somewhat of the porter colour, but is not so dark as in the first attack; the pulse is 100, and of tolerable strength; the tongue is moist, and almost clean; he has severe general pains, but no epigastric tenderness; he has had no vomiting.—*To have an allowance of sago.—Habeat enema cum sol. mur. morphiæ ʒss, vespere.*

3*d November*, (*eighteenth day.*) Last night, between seven and eight o'clock, he vomited a quantity of brown matter, tinged with green; but the sickness was checked by an ounce dose of the creasote mixture; it recurred, however, between nine and ten o'clock, when a similar dose was administered; and since then, he has not been troubled with it; the quantity of fluid ejected on both occasions has been now found to measure eight ounces. He complains of great pain in the epigastrium. He has an extremely weak, and dejected appearance; the face is bronzed; his pulse is 100, and feeble; he has taken no food for the last thirty-six hours, his only sustenance having been wine negus.—*Augeatur vinum ad ʒxij.—Applicentur cataplasmata assiduè epigastrio.*

4*th November*, (*nineteenth day*). As he vomited the wine seve-

ral times during yesterday afternoon, he was ordered four ounces of whisky, mixed with forty drops of the solution of the muriate of morphia. He vomited the first half ounce of it, which had been administered in the form of toddy, but retained the remainder, which he got undiluted; and in addition, he has had eight ounces of wine. According to his own statement, and that of the nurse, he was much better at seven o'clock this morning than he was yesterday, or than he is at present. The countenance is improved. Perspiration began at four o'clock A.M., gradually became more copious, and continued very profusely till ten o'clock, when his shirt and sheets were shifted. This is the second sweat which he has had since admission, and the fourth since the invasion of the disease: it has relieved the general pains, except some pain in the back, which he felt previously. The epigastric tenderness is very slight; the pulse is 62, soft, and regular, but very feeble; the tongue is much as yesterday; he has had two stools since yesterday, which are much less dark in colour, and quite fluid.—*Let the wine be reduced to* ℥*vi, and let him have* ℥*vi of whisky, containing* ʒ*iss of the solution of the muriate of morphia.*

8th November, (*twenty-third day.*) He continued very much in the same state as that described in the report of the 4th, till last night, when he suddenly became weaker, and dissolution seemed to be impending. His countenance is extremely dejected. He complains of severe pains in the joints. His pulse is 54, and of tolerable strength; a few hours ago, it was 45 only; but since then, he has had some wine. The bowels were opened this morning, and the matter evacuated is quite natural; the tongue is clean, and moist; the skin is soft; the intellect is clear, and he has had no incoherence. He vomited a good deal of the wine.—*Omittatur vinum.—Continuatur spirit. communis ad* ℥*vi, cum sol. mur. morphiæ.*

9th November, (*twenty-fourth day.*) There is a marked improvement in his appearance to-day. His pulse is 84, and of somewhat better strength.

10th November, (*twenty-fifth day.*) The improvement in the general appearance continues. The pulse is 80, and of the same strength as yesterday; the tongue is clean, and the bowels are open. He has a good deal of cough, attended with expectoration. Some degree of pain remains in his shoulders and knees,

but it is less than formerly. About five ounces of the mixture of whisky and morphia remain, the rest he has taken, without vomiting any of it.—*R. acetatis plumbi gr. xxiv, pulv. scillæ gr. xij, mucilaginis q. s. ut ft. massa, in pilulas xij dividenda. Sumat unam, secundâ quâque horâ.—Applicetur sinapisma pectori statim, et repetatur post horas sex.—Habeat pediluvium horâ somni.—The mixture of whisky and morphia to be discontinued.*

15*th November*, (*thirtieth day.*) The prescriptions of the 10th had the desired effect. He has been gaining strength daily; and yesterday, and to-day has been able to sit by the fireside for a short time. Since the whisky was discontinued, he has had neither stimulant nor cordial.—*Let him have a pint of porter daily.*

21*st November*, (*thirty-sixth day.*) He is dismissed cured.

Case XVII.—Summary.—*Yellowness on the 6th day, and dark purple spots on the 7th—Remission—Relapse on the 14th day, with recurrence of the yellowness.—Treatment; calomel and opium, aperients, &c.*

William Dodds, a native of, and constantly resident in Edinburgh, living at present in the Pleasance, single, aged 20, a carpenter, of spare habit, with dark hair and eyes, was

Admitted, on 9th October, (*sixth day.*) He was seized on the 4th with rigors, headach, and pains in the back, and limbs. Since then, the symptoms have increased, with the addition of sleeplessness, and to-day, yellowness of the skin has appeared.

The pulse is 96, of good strength; the tongue is white, and moist; the bowels are open; he has much thirst; the headach is severe; the intellect is clear; there is a sweetish, saline taste in the mouth; he feels much weakness. There is moderate yellowness, excepting of the extremities; the tinge of the face, and neck, is very marked.—*Abradatur capillitium; et applicetur assiduè aqua frigida toto capiti.*

10*th October*, (*seventh day.*) He is much as yesterday. A profusion of dark purple spots has appeared all over the body.—*Habeat pilulam calomelanos et opii, vespere, et repetatur cras mane.*

11*th October*, (*eighth day.*) There has been little if any change since yesterday. From negligence, he has not had the pills which were ordered. The bowels are confined; the urine is of a very

dark-red hue.—*A blue pill has been just now administered; and another is ordered to be given in the evening.—Let a purgative enema be injected immediately.*

12*th October*, (*ninth day.*) He got the medicines which were prescribed. He slept well, and feels much better. The pulse and skin are natural; the tongue is cleaning; the muscular and articular pains are pretty severe. The yellowness has almost disappeared from the face, and general surface, but is still very marked on the sclerotics; the appetite is returning.—*To have rice diet.—Habeat haustum cum solutionis muriatis morphiæ gtt. xl, horâ somni.*

13*th October*, (*tenth day.*) The tongue is moist, and nearly clean; the yellowness is now extremely faint, but is still distinct; he feels much better, and complains only of general pains.—*Quiescat.*

17*th October*, (*fourteenth day.*) For the last two days, he has had rice diet. He went on well, till this forenoon, when he was seized with the relapse, which is marked by symptoms similar to those of the invasion. There is at present no yellowness.—*Applicetur aqua frigida toto capiti.—To have low diet.*

19*th October*, (*sixteenth day.*) The yellowness has returned in some degree. He has frontal headach, intense general pains, and sleeplessness. The face is bronzed over the malar bones; elsewhere, it is very yellow.—*Two blue pills have been given just now.*

20*th October*, (*seventeenth day.*) He has had no stool since the blue pills were given yesterday. He slept none last night, although he had an anodyne draught. The yellowness has become much more intense.—*Habeat olei ricini ʒiss, statim; et injiciatur enema domesticum h. s., si opus sit.—R. solutionis muriatis morphiæ gtt. xxv, tincturæ hyoscyami nigri ʒss. Misce, et ft. haustus, h. s. s.*

21*st October*, (*eighteenth day.*) As the oil operated, the enema was not administered. He slept ill last night. There is some abdominal uneasiness; the tongue is loaded with a yellow fur; on the face, the bronzing is beginning to predominate over the yellowness, which is fading on the whole surface.—*Habeat pilulam calomelanos et opii, tertiâ quâque horâ.*

22*d October*, (*nineteenth day.*) The bronzing is much more distinct than yesterday; there is only a slight trace of yellowness around the mouth. On awaking during the night, and feeling

thirsty, he drank a large quantity of cold water; after which, violent rigors came on, but the coldness soon left him, and was replaced by burning heat, although the trembling continued. While in this state, bottles of hot water were applied to his feet, and round his body; some wine negus was given him; and in about half-an-hour from the invasion of the rigors, a profuse perspiration broke out, which lasted two hours. He has taken three of the calomel and opium pills ordered yesterday. The tongue is less loaded; the pulse is 78, full, but rather compressible; there is no abdominal uneasiness; the muscular and articular pains have almost left him; he looks, and feels much better; the bowels have not been opened since the 20th, when he had the castor oil. —*Habeat enema purgans statim.*

26*th October*, (*twenty-third day.*) He complains of pains in the shoulders, arms, and legs; but is decidedly improving.—*To have full diet to-morrow.*

27*th October*, (*twenty-fourth day.*) He rose this morning, but, owing to the severity of the general pains on motion, he was not able to dress, and had to go to bed again almost immediately. His appetite is good.

2*d November*, (*thirtieth day.*) Since last report, he has been troubled more or less with diarrhœa, which has, within the last two days, been very severe, and has resisted the remedies prescribed,—viz. the decoction of logwood, in one-ounce doses every three hours, the electuary of catechu combined with the chalk mixture, and a starch enema containing forty drops of laudanum.—At present the complaint is unabated.—*R. opii gr. iij, micæ panis, et conservæ rosarum q. s. ut fiat massa in pilulas xij dividenda. Sumat unam post sedem singulam liquidam.—Habeat suppositorium c. opii gr. iij, horâ somni.*

3*d November*, 1 P.M. (*thirty-first day.*) He had no stools till midnight, between which time and the present he has had eight, which is a diminution in their frequency, as compared with yesterday. From negligence, five only of the pills have been given him.—*Let him take one every hour till they are done.*

4*th November*, (*thirty-second day.*) The pulse is 72, and rather feeble; his bowels have been opened five times, since last report; the stools are feculent, partially formed, and streaked with blood, and mucus. He complains of general abdominal uneasiness, when pres-

sure is made; particularly, when a part, about the size of a crown-piece, in the mesial line, nearly midway between the umbilicus and pubes, is touched. There is no fulness in either hypochondriac region.—*Injiciatur enema amyli c. tincturæ opii ℥iss, statim.—Habeat pilulam plumbi opiatam, quârta quâque horâ.*

11*th November*, (*thirty-ninth day.*) He went yesterday from the Fever Hospital to Ward No. 4, Royal Infirmary, that he might continue a few days longer under observation. The diarrhœa has almost ceased; and he is very anxious to leave the hospital. There is a dark stripe extending between the umbilicus and pubis. It has appeared since yesterday.—*Let him have full diet.*

13*th November*, (*forty-first day.*) To-day he is dismissed tolerably strong, and free from complaint. The dark stripe remains.

Case XVIII.—Summary.—*Purpura, yellowness, hare soup vomit, and hæmorrhage from the lungs in the first attack—Relapse on the* 13*th day, the remission between it and the first attack being ill marked—Recovery. Treatment; calomel and opium, wine.*

Alison Wilkie, aged 46, the mother of ten children, of ordinary development, with dark hair, and hazel eyes; a native of Edinburgh, where she has been all her life, at present residing in the Horse Wynd, was

Admitted on 30*th September*, (*sixth day.*) She was seized on the 25th September, with languor, rigors, severe headach, and acute general pains, but has had no sweating since the invasion of the fever. The epidemic fever has been in the family. At present, the pulse is 118, and small; the tongue is dry, and dark coloured; she has great thirst; there is distinct, but not very vivid yellowness of the conjunctivæ, face, neck, chest, and abdomen; the headach is not severe; the bowels are open.—*Abradatur capillitium, et postea applicetur aqua frigida toto capiti.*

1*st October*, (*seventh day.*) The report of yesterday was made with an imperfect light in the ward, and on that account, the state of the skin could not be examined with sufficient care. To-day, the yellowness is very decided on the conjunctivæ,

face, chest, arms, and abdomen; on the legs, it is somewhat less intense. Upon the abdomen, and arms, the yellowness has a purplish tinge, and there are small purple spots scattered about irregularly in these situations, to which the neighbours attracted the notice of the patient three days ago. She does not seem to be worse than yesterday, but there is no amendment; the bowels have not been opened since admission.—*Habeat enema purgans, statim.—Sumat pilulam hydrargyri, horâ somni, et repetatur cras mane.—Habeat vini rubri ℥vj, formâ "negus."*

2*d October*, (*eighth day.*) She passed a restless night. Yesterday afternoon, she vomited a good deal of black-coloured matter, which the nurse describes as resembling hare soup, but unfortunately it has not been preserved; there has been slight hæmorrhage from the gums, which she never had before; the pulse is 100, and somewhat deficient in strength; the bowels were opened by the enema; she had the blue pills as ordered.—*Sumat pilulam calomelanos et opii, sextâ quâque horâ, ad quartam vicem.—Continuatur vinum.*

3*d October*, (*ninth day.*) There has been no more vomiting, nor hæmorrhage from the gums; she passed a comfortable night, and slept some; the yellowness has faded considerably, and the countenance is improved; the tongue is parched, and on its centre there is a brown stripe; the pulse is 116, soft, and deficient in strength; the skin is cool, and natural; she has had several dark stools; the urine is scanty, and porter-coloured; she has some cough; there is no sweating. The pills and wine were administered as prescribed.—*Continuatur vinum.—Habeat trochiscas morphiæ et ipecacuanhæ xx. Sumat j vel ij, urgente tussi.*

4*th October*, (*tenth day.*) The purple spots cannot be seen; the yellowness is disappearing rapidly; and in every respect, she is improving.—*Continuatur vinum.*

5*th October*, (*eleventh day.*) The improvement certainly continues, though the patient does not think so; she spits up a quantity of very tenacious mucus, occasionally containing black carbonaceous-looking masses, of the size of a large pea, which give a sooty streaking to the sputa; the urine is much more abundant, and has now a straw-colour; some scalding pain attends micturition; the tongue is clean, and moist; the pulse is 90, small and thready.—*Let a bottle of porter be substituted for the wine.*

6*th October*, (*twelfth day.*) The expectoration continues as yesterday, and there is some pain in the chest, with a continual tendency to sleep; the pulse is rather firmer.—*Apply a blister, three inches by three, to the chest, for three hours; and then a poultice.*

7*th October*, (*thirteenth day.*) The blister rose well; the expectoration has greatly diminished in quantity, and is of a lighter colour; the pulse is 96, and deficient in strength.—*To have cold beef tea for ordinary drink.*

Vespere.—She had a severe fit of rigors at 3 P.M.

12*th October*, (*eighteenth day.*) Since last report, (excepting on the 8th), there has been a very slow, but steady convalescence. The bowels have been regulated by castor-oil. The debility is still extreme; general soreness, with articular and muscular pains cause her great agony at times, and almost prevent motion.

2*d November*, (*thirty-ninth day.*) The wine was discontinued some days ago. She has made a complete recovery, and is now dismissed quite strong, and free from all pain.

CASE XIX.—SUMMARY.—*Bronzing of the countenance before seizure —Short remission and delirium on the* 3*d day—Yellowness of conjunctiva on* 3*d day, and of general surface on* 5*th—Spots on* 6*th day—Severe headach, vomiting, and sweating—Slight rigors on the* 15*th day; but no relapse.—Recovery. Treatment; calomel and opium, morphia, stimulants, quinine.*

Dr Heude, born in India of English parents, resident in Edinburgh during the last three years, single, aged 23, of nervous temperament, spare, muscular frame, with dark hair and eyes,

Took ill on 21*st September.* During the last six weeks, he has been resident clerk in the New Fever Hospital. His previous health has been good. His habits have been studious.

He was seized with severe headach, nausea, pain in the back, a feeling of chilliness, languor, anorexia, and much thirst about the close of the noon visit. He slept well last night, and previously, he showed no symptoms of the fever, except bronzing.

His pulse is 120, full, and soft; the tongue is moist, clean in front, but coated with a brown fur behind; the bowels are confined; the temperature is increased; the skin is dry; there is no

eruption; there is very severe headach; the intellect is clear; there is a bad taste in the mouth; he is greatly depressed in strength; the expression is anxious, and the face is much bronzed; there is some cough.—*Abradatur capillitium; et applicentur hirudines viij temporibus.*[1]—*Applicetur aqua frigida capiti.*—*Habeat pilulam colocynth. compos.*—*Injiciatur enema purgans, si opus sit.*

22*d September*, (*second day.*) The symptoms continue, with vomiting, and increased headach. This morning, about six o'clock, he had profuse sweating. The head was shaved, and the leeches bled freely for a long time. The bowels have been opened by the medicine ordered yesterday.

23*d September*, (*third day.*) Eight leeches have been twice applied to the head, since last report. The symptoms are much the same as yesterday. The nurse states, that there was a remission, early in the morning. He slept none during the night. The conjunctivæ are congested, and have a slightly yellow tinge. He has had a good deal of vomiting; and the headach is as severe as formerly. He has been very incoherent to-day. There was a fit of perspiration at 7 A.M.

24*th September*, (*fourth day.*) He slept some, after taking, about midnight, a draught containing twenty-five drops of the solution of the muriate of morphia. He is more restless, and incoherent to-day. He sweated at eight o'clock this morning.

25*th September*, (*fifth day.*) He passed a restless night, but had some sleep towards morning, after getting an injection containing half a drachm of the solution of morphia. He sweated profusely at 4 A.M.; but, as on the former occasions, has been in no way relieved by it. The whole surface of the body has a dusky yellow colour, but there is less of this on the arms and legs than elsewhere; there is very slight increase of dulness over the liver, and none over the spleen, and in neither region is there any tenderness. It is difficult to describe the colour of the countenance. Over the malar bones, a deep purple hue preponderates over the yellowness, which is general elsewhere. He has no abdominal uneasiness, but severe general pains, and headach. —*Habeat pilulas calomelanos et opii duas.*

[1] The leeches were applied at Dr Heude's urgent request, and with Dr Alison's sanction.

26*th September*, (*sixth day.*) The symptoms are aggravated to-day; the yellowness is as yesterday. Early this morning, the nurse observed some spots on the chest. About 11 A.M., (when now examined), they are irregular, of nearly the size of a split-pea, and of a pale lake colour. They do not disappear on pressure. He had an enema last night, containing a full dose of the solution of the muriate of morphia.

27*th September*, (*seventh day.*) The pulse is feebler to-day, and variable. The incoherence, headach, and general pains continue. The spots, which became deepened in colour last night, are now purple. The urine is frothy, and as dark as porter. He has had three calomel and opium pills since yesterday, and one assa-fœtida and aloes pill, which opened the bowels. He has had a small quantity of wine.

28*th September*, (*eighth day.*) *Noon.* He was very violent during the night, and required to be kept in bed by force. When seen at 3 A.M., his pulse was 130; at 5 o'clock, it had fallen to 100; and it is at present 102, and very feeble. Though somewhat incoherent and desponding, he lies quiet. He has passed two tarry stools; the urine is still porter-coloured; the yellowness is slighter; the petechial eruption is very marked. During the last hour, he has had about three ounces of wine, which has improved his pulse somewhat.

2 P.M. The pulse is 90, and firmer. He has had about four ounces of wine since noon.

6 P.M. Pulse 80. His countenance is improved.

11 P.M. Pulse 82. He is quiet, but has no tendency to sleep. —*To have a calomel and opium pill.—Let the feet be bathed in hot water, immediately.*

29*th September*, (*ninth day.*) He passed a tolerable night, and is to-day a good deal better. He has had two stools of a tarry consistence and colour. The urine is rather paler.

5*th October*, (*fifteenth day.*) *Vespere.* Since last report, he has been steadily, but slowly improving, under the liberal use of stimulants. Yesterday, he was ordered an eight-ounce quinine mixture, containing twenty grains of the sulphate, of which he has taken three-fourths. This afternoon, he had a feeling of chilliness, after which a profuse sweat broke out, (the first since the morning of the 25th September), and he is still per-

spiring. Since yesterday, he has had no general pain or headach. His appetite is good; his strength is increasing; the countenance is now almost natural, and so are the alvine and urinary secretions.

26*th November.* Since last report, he has had no symptoms of the fever, and he has now resumed his hospital duties. The convalescence was steady, under the liberal use of wine and ale. The quinine mixture was continued for eight days.

CASE XX.—SUMMARY.—*Bronzing before seizure—Rosy lenticular spots on the 6th day—Yellowness on the 8th day—Pustular eruption on the 14th day—Salivation during the intermission, from mercury taken during the first attack—Relapse on the 19th day.—Treatment; opium, calomel and opium, quinine, hydriodate of potash, wine.—Recovery.*

Mary Wallace, Scotch, a widow, aged 36, day-nurse in the female wards of the New Fever Hospital, of spare habit, with brown hair, and light eyes,

Became a patient on 1st October.—During the last week, she has been in almost constant attendance in the apartment of Dr Heude, who has the prevailing fever. Since an attack of rigors four days ago, she has been complaining of languor and debility, pain in the back, headach, thirst, bad taste in the mouth, and occasional nausea. Her tongue has been foul; her bowels have been pretty regular; her face, during a longer period, has been bronzed, (even before she felt unwell,) and latterly, became almost purple.

The pulse is above 100, of tolerable strength; the tongue is moist, clean in front, and covered with a thin brown fur behind; there is intense thirst; the bowels are rather confined; the skin is hot, and dry; there is no eruption; the headach is very severe; her intellect is clear; she has a bad taste in the mouth; her muscular power is greatly depressed; the expression of the face denotes much suffering; there is bronzing of the countenance, and on the upper part of the cheeks, a purple hue is perceived.—*R. pulveris scammonii gr. viij, calomelanos gr. iij. Misce. Sumat statim.—Applicetur aqua frigida capiti.*

2*d October,* (*fifth day.*) The pulse is 104, rather deficient in

strength; the tongue is moist, and only slightly coated with a white fur; the bowels have been freely opened; there is intense headach; and much thirst. The countenance is more depressed; the face is less purple, and more bronzed.—*Abradatur capillitium, et applicetur lotio muriatis ammoniæ capiti.—Habeat haustum cum tincturæ hyoscyami ʒi, horâ somni.*

3*d October*, (*sixth day*,) *half-past* 1 P.M.—She has suffered much from restlessness, sleeplessness, and headach, since yesterday. The pulse is 108, and of the same strength as yesterday,—certainly not weaker; the tongue is slightly white, and moist; the bowels are confined; she has a good deal of pain in the back. There is much nausea, with vomiting of a green fluid with an inky sediment. The countenance denotes suffering, but not depression. On the chest, are about ten rosy spots, which disappear on pressure, but return vividly when it is removed. She has taken half an ounce of the creasote mixture.—*Habeat pilulam hydrargyri statim, et repetatur cras mane.—Sumat misturæ creasoti unciam, quartâ quâque horâ, si opus sit.—Applicetur sinapisma epigastrio; et linimentum saponis cum opio abdomini, et regioni lumbis.*

Vespere. Since the former report was made, (between 1 and 2 P.M.), there has been a good deal of delirium, with restlessness, and the desire to rise from bed, which she has done frequently. She has intense headach, general pains, and some abdominal uneasiness. The eruption is spreading over the arms, but not on the abdomen, or legs.—*Habeat haustum cum solutionis muriatis morphiæ ʒiss, horâ somni.—Injiciatur enema purgans, cras mane.*

4*th October*, (*seventh day.*) The creasote mixture did not relieve the vomiting; but she only took two doses. She slept some after the draught, with occasional fits of perspiration and chilliness during the night, and is now lying quiet and collected, decidedly better. There is slight drowsiness, the effect probably of the large dose of morphia; the pulse is 78, rather deficient in strength; the skin is cool, and natural; the bowels have been very freely opened by the pills and enema; the tongue is parched, and clean, excepting in the centre, where it is a little brown; there is much thirst.—*Quiescat.*

5*th October*, (*eighth day.*) Towards midnight she became restless, and afterwards had a good deal of delirium, with desire to

rise from bed, especially on awaking from short, disturbed slumbers. There is a slight yellow tinge on the skin of the face and neck; but on the former, the bronzing predominates. The vomiting is much less urgent; the bowels are not freely open, but there is a constant desire to evacuate them; the tongue is furred, and dry; the general pains, which are still severe, have been somewhat relieved by friction with the soap and opium liniment; the urine is scanty, and of a dark colour, approximating to that of porter. She is extremely restless; and her countenance indicates suffering.—*Habeat pilulam calomelanos et opii, tertiâ quâque horâ.—Injiciatur enema purgans, cras mane.*

6*th October*, (*ninth day.*) She has taken six calomel and opium pills, and had a good deal of disturbed sleep during the night. Her countenance is much improved; the pulse is 86, of good strength; the tongue is clean, but parched; the eruption is fading, but still visible; the yellowness is fainter than yesterday. —*Habeat olei ricini ℥iss, statim.—Habeat acidi sulphurici diluti gtt. xv ex aquæ fontis ℥i, ter in diem, pro potû.*

7*th October*, (*tenth day.*) She slept none last night. The pulse is 76, and of moderate strength; the tongue is clean, and moist; she has passed very fœtid, dark, melæna-looking stools. The yellowness has entirely left her; the eruption is still visible, and has not faded any since yesterday; the face is much bronzed.—*R. calomelanos gr. iij, pulv. rhœi gr. viij, pulv. zingiberis gr. ij. Misce. Fiat pulvis, vespere sumendus.—Habeat haustum, cum solutionis muriatis morphiæ gtt. xxxv, horâ somni.*

8*th October*, (*eleventh day.*) She had a disturbed night, having been much troubled with diarrhœa.—*Injiciatur statim enema amyli cum solutionis muriatis morphiæ gtt. xl.—R. opii puri gr. ij, conservæ rosarum q. s. ut fiant pilulæ tres; habeat unam quartâ quâque horâ.—Habeat vini rubri ℥iv.*

9*th October*, (*twelfth day.*) The bowels have been twice opened, without much pain. She passed a pretty good night. The pulse is 96, of moderate strength; the tongue is clean.—*Habeat haustum cum solutionis muriatis morphiæ gtt. xl, horâ somni.*

11*th October*, (*fourteenth day.*) She has been improving since last report. Yesterday, a pustular eruption appeared on the chin, and angles of the mouth. *To have steak diet.*

12*th October*, (*fifteenth day.*) She continues to improve.—*R.*

sulphatis quininæ ℈*i*, *acidi sulphurici diluti* ℈*i*, *infusi gentianæ* ℥*iv*. *Misce*. *Sumat* ℥*ss*, *sextâ quâque horâ*.

14*th October*, (*seventeenth day*.) She cannot take the quinine. She has soreness of the gums, with looseness of the teeth.—*Omittatur mistura quininæ*.—*Utatur melle boracis*.—*R. hydriodatis potassæ* ℥*ij*, *aquæ fontis* ℥*iv*. *Solve*. *Sumat* ℥*i*, *quater in diem*.

16*th October* (*nineteenth day*.) She continued to improve, till this morning, when she was suddenly attacked by headach, general pains, and vomiting. Yesterday, she was going about the wards, using too much freedom with herself.—*To have low diet*. —*R. pulveris opii gr. ij*, *conservæ rosarum q. s*., *ut fiant pilulæ iv*. *Sumat unam quartâ quâque horâ*.

18*th October*, (*twenty-first day*.) She is suffering much from vomiting, headach, and general pains; the pulse is very frequent. —*Repetantur pilulæ opii ut antea*. *Injiciatur enema amyli cum solutionis muriatis morphiæ* ℥*ss*.

19*th October*, (*twenty-second day*.) She is in all respects much better.

26*th October*, (*twenty-ninth day*.) Slight pains in the arms and shoulders continue. She feels quite well, but weak; and is allowed to go out to walk for an hour.

4*th November*, (*thirty-eighth day*.) Though still weak, she is quite well; and has this day resumed her duties in the wards.

24*th November*, (*fifty-eighth day*.) She is now in excellent health, and has been gaining strength progressively since last report.

Case XXI.—Summary.—*Slight yellowness on the* 10*th day—Remission—Relapse on the* 16*th; recurrence of the yellowness on the* 24*th, and abortion on the* 25*th day—a second Relapse on the* 50*th day.—Recovery. Treatment; castor oil, henbane, opium, &c.*

Mrs Cox, Irish, aged 27, from the Cowgate, moderately stout, with dark hair, and light eyes, was

Admitted, 29*th September*, (*seventh day*.) She is in about the 5th month of pregnancy, according to her own account. For some time past, she has not enjoyed good health. She states, that her husband, who is a labourer, has been out of work for the last ten months, and that the family has had insufficient aliment in con-

sequence. There were several cases of fever in the stair where she lived, before she took ill.

On the 23d, she was seized with rigors, headach, pain in the back and limbs, anorexia, thirst, and weakness; and these symptoms have continued, more or less, till admission. She felt rather better this morning, than she has done since her seizure.

The pulse is 140, soft, and weak; the tongue is brown, and moist; there is a good deal of thirst; the bowels are open from medicine; there are flea-bites, with circles of ecchymosis around them, thinly scattered over the chest and abdomen; she has slept very little since admission; there is very severe headach; the intellect is clear; the expression of the countenance indicates suffering; there is bad taste in the mouth; she feels very weak; she has some cough, and slight uneasiness in the abdomen.—*Abradatur capillitium, et applicetur aqua frigida toto capiti.*

30*th September*, (*eighth day.*) She slept very ill during the night, and the headach is not relieved. The head has not been shaved as ordered; and the cold water has not been diligently used. The pulse is 118, very feeble; the tongue is moist, and nearly clean; the bowels have not been opened since admission; there is a good deal of pain in the lower part of the abdomen. The movements of the fœtus have been very feeble since her illness; and she has not perceived them at all to-day. The dark abdominal line is broad, but rather indistinct.—*Abradatur capillitium, et applicetur aqua frigida capiti.—Capiat olei ricini ℥i, statim.—Habeat haustum cum solutionis muriatis morphiæ gtt. xxv, horâ somni.—R. tincturæ hyoscyami ℥ss. Sumat gtt. xxv, cras mane, et repetatur si dolor sistat.*

2*d October*, (*tenth day.*) She has taken the henbane three times, and feels much better. There is a slight yellow tinge on the face, neck, chest, and abdomen, which is not perceptible on the legs. The bowels are open.—*Quiescat.*

3*d October*, (*eleventh day.*) There is some drowsiness, which seems to be caused by the henbane, which she has taken regularly. She looks much better; she complains of pains in the joints, with stiffness and soreness in the limbs on motion. The pulse is 80, of moderate strength. There is no trace of yellowness apparent, except a scarcely perceptible tinge on the neck, and face.

—*R. hydriodatis potassæ* ʒij, *infusi gentianæ* ʒiv, *sumat* ʒj, *formâ haustus, sextâ quâque horâ.*

4*th October*, (*twelfth day.*) The general pains are much better, and she feels in every respect more easy. She has taken two doses of the mixture prescribed yesterday.—*Pergat.*

5*th October*, (*thirteenth day.*) She is entirely free of the general pains; and there is a great improvement in her appearance. The pulse, tongue, and skin are natural. The bowels are confined. She has taken five doses of the mixture.—*R. olei ricini* ʒi, *aquæ menthæ* ʒij, *solutionis muriatis morphiæ gtt. xv. Fiat mistura, horâ somni sumenda.*

8*th October*, (*sixteenth day.*) Since last report, she has been going on improving.—*Quiescat.*

9*th October*, (*seventeenth day.*) Last night, she was seized with headach, and subsequently, perspiration broke out. At present, the pulse is 100, and soft. She makes no complaint.—*Quiescat.*

11*th October*, (*nineteenth day.*) She feels ill, and complains of pain in the abdomen, back, and thighs. The pulse is 98, soft, and of good strength.—*Habeat haustum cum solutionis muriatis morphiæ gtt. xl, horâ somni sumendum.*

12*th October*, (*twentieth day.*) There has been little, if any change, since the visit yesterday.—*Habeat tincturæ hyoscyami gtt. xv, tertiâ quâque horâ.*

13*th October*, (*twenty-first day.*) The improvement, since last report, is very decided; the pains have entirely left her. A very distinct dark stripe extends from the ensiform cartilage to the pubes. It is very much deeper than when last reported.—*Omittatur tinctura hyoscyami.*

17*th October*, (*twenty-fifth day.*) On the 15th, she had bearing-down pains occurring regularly at intervals, which abated towards evening, after the administration of a draught, containing a drachm of the solution of the muriate of morphia. About half-past three o'clock this morning, they returned; and about four o'clock, a female fœtus, apparently between the fourth and fifth month, was expelled. The placenta was retained, and had to be removed by the hand at 10 A.M., which was accomplished with some difficulty, owing to the contraction of the uterus. At present, she feels easy. There has not been much

hæmorrhage. The pulse is 68. Yesterday, the yellowness recurred in considerable intensity; it has rather faded to-day.—*Habeat haustum c. solutionis muriatis morphiæ gtt. xl, horâ somni sumendum.*

18*th October*, (*twenty-sixth day.*) She is going on well. The yellowness has disappeared.—*Quiescat.*

17*th November*, (*fifty-sixth day.*) She is now convalescent from a third attack, which she had on the 11th of this month.

23*d November*, (*sixty-second day.*) Dismissed cured.

CASE XXII.—SUMMARY.—*Yellowness on the 9th day—Relapse on the 19th day, in which there was severe diarrhœa, (perhaps caused by colchicum,) and no yellowness.*

Margaret M'Intosh, Scotch, married, aged 61, from Stevenlaw's Close, of stout development, with iron-grey hair and blue eyes, was

Admitted, 7*th October*, (*seventh day.*) On the 1st, she was seized with pain in the back and limbs, slight headach, and shivering. The headach increased on the 3d, and has continued very severe since then. She attributes the present attack to exposure to contagion, as she has been in the habit of coming every night to see a daughter at present in this hospital.

The pulse is 116, of moderate strength; the tongue is brownish, moist, and chapped; the bowels have been opened slightly to-day; she gets no sleep; the headach is severe; the intellect clear; the muscular power much depressed.—*Habeat pilulam colocynthidis compositam.*

8*th October*, (*eighth day.*) She slept pretty well during the night; her bowels have been opened by the colocynth pill; the headach is severe; the pulse and tongue are as yesterday.—*Abradatur capillitium, et applicetur aqua frigida capiti.*

9*th October*, (*ninth day.*) She has passed a bad night, owing to purging from a dose of castor oil, given about 10 P.M. by the nurse. She feels very weak to-day; the pulse is 116, weak, and tremulous; the tongue is white, and rather dry; there is distinct yellowness of the face, chest, and conjunctivæ.—*Habeat pilulam hydrargyri statim, horâ somni, cras mane, et meridie.—Habeat vini rubri ℥iv.*

10*th October*, (*tenth day.*) The yellowness is the same as yesterday; the tongue is chapped, dry, and inky-looking.—*Habeat pilulam hydrargyri, horâ somni.—Continuatur vinum.—To have cold beef-tea for drink.*

11*th October*, (*eleventh day.*) She looks, and feels better than yesterday; the bowels are confined.—*Habeat olei ricini ℥i statim.*

12*th October*, (*twelfth day.*) She feels much better than yesterday. The yellowness has in a great measure disappeared.—*Quiescat.*

13*th October*, (*thirteenth day.*) She feels much better, but complains of weakness.—*Quiescat.*

19*th October*, (*nineteenth day.*) To-day, she has relapsed with considerable severity.

20*th October*, (*twentieth day.*) The skin is hot; the pulse is 100; the tongue is loaded with a white fur in the centre, clean, and red at the edges; there is excruciating general pain, which is so severe as to prevent her from turning in bed.—*R. vini colchici ℥ss, tincturæ opii ℥ij. Misce. Sumat guttas xv, ter in diem.*

25*th October*, (*twenty-fifth day.*) The muscular and articular pains have left her. There is much diarrhœa, with tenderness of the abdomen, and griping; the stools are liquid, and streaked with blood.—*Injiciatur enema anodynum.—Habeat pilulam acetatis plumbi et opii tertiâ quâque horâ.—Intermittatur vinum colchici.*

27*th October*, (*twenty-seventh day.*) The diarrhœa abated after six pills had been taken; she is now free from pain, and much improved.—*Quiescat.*

17*th November*, (*forty-eighth day.*) She is much better now, but is weak, and complains of trembling fits, which seize her when she rises from bed. She states, that her life has been several times, (before entering the hospital,) in extreme jeopardy, from fits of purging.—*R. sulphatis quininæ gr. xxiv, extracti gentianæ compositi q. s. ut fiant pilulæ xij. Sumat unam bis in diem.*

26*th November*, (*fifty-seventh day.*) She is slowly regaining her strength; but it is not yet considered safe to dismiss her from the hospital. Her only complaint is weakness.

CASE XXIII.—SUMMARY.— *Yellowness in the first attack—Relapse on the* 15*th or* 16*th day, accompanied with erysipelas, livid patches, and delirium, followed by parotid abscess, and tedious Recovery—Treatment; stimulants, &c.*

Janet Baillie, aged 70, married, residing in Borthwick's Close, was

Admitted, 2*d August*, along with her husband. She was treated by Dr Craigie, from the time of admission, till I took charge of the Hospital on the 10th, when she was found convalescent from a pretty severe attack, in which there had been jaundice. From the great pressure of cases, it was not attempted to take the history of all those under treatment; and unfortunately, Janet Baillie was not one of those selected for minute observation, and reporting. The notes extant of her case are very scanty.

She relapsed on the 15th or 16th day of the disease; on the 2d day of it, she had congestive delirium, involuntary passage of the stools, and urine, erysipelas of the face and scalp, livid patches on the back and limbs, and subsequently, the formation of an immense parotid abscess, which rendered the recovery very tedious. The quantity of wine, whisky, and other stimulants, which she consumed, was much greater than that used by any other patient, treated by me in the New Fever Hospital. Her recovery also, it may be added, was quite unlooked for. The treatment consisted in cautious purging, the free use of stimulants, and topical applications for the erysipelas.

Her husband had a severe attack, but of a different kind; he had no well-marked remission, and his case was very similar to the ordinary continued fever of Edinburgh, although no eruption was noticed.

CASE XXIV.—SUMMARY.—*Admission on the* 15*th day, being the* 1*st of his Relapse—Yellowness, urgent hiccup, and vomiting.—Hare soup vomit. Treatment; opium, creasote, and wine. Recovery.*

John Conway, aged 60, an Irish labourer, single, in Edinburgh only for one day, and just arrived from Dunbar, was

Admitted on the 9*th October*, (*fifteenth day.*) On the 25th

September, he was seized with headach, shivering, and pains in the back. He seems to have passed through the first attack, and to be now entering on the second.

The pulse is 84, and of moderate strength; the tongue is clean; there is much thirst; the bowels are confined; he complains of sleeplessness, intense headach, and a bad taste in the mouth; he has severe hiccup, much muscular depression, and bronzing of the countenance.

10*th October*, (*sixteenth day.*) The hiccup is much moderated; the pulse, and skin are natural.

12*th October*, (*eighteenth day.*) Severe hiccup, and vomiting distress him.

13*th October*, (*nineteenth day.*) The hiccup, and vomiting are very annoying. Sinapisms have been repeatedly applied.

15*th October*, (*twenty-first day.*) There is less hiccup, but he is excessively depressed. Opium, and creasote mixture have been the medicines employed to check the vomiting, but they have produced no benefit; he has taken eight doses, of one ounce each, of the creasote mixture, and several grains of opium, in the form of pill.—*Habeat vini rubri ℥vi.—R. opii puri gr. v, conservæ rosar. quantum suff. ut fiat massa, in pil. x dividenda.—Sumat unam, secundâ quâque horâ.*

16*th October*, (*twenty-second day.*) Yesterday, when under the narcotic influence of the opium, the hiccup and vomiting were moderate; he slumbered much, but had no refreshing sleep. To-day, he has vomited a good deal; the matter ejected seems to be the ingesta unaltered. He has no vomiting, except after eating or drinking; and every thing he swallows is immediately rejected.

18*th October*, (*twenty-fourth day.*) The hiccup seems to be gone; he is lying tranquil; he has taken all the pills. During last night, he awoke from slumber, and vomited, without pain or straining, a large quantity of fluid, resembling hare soup in colour and consistence. It consists of a supernatant fluid, with a sediment of black particles, resembling coarse oatmeal in all their physical characters, excepting colour. He seems better than he has been for some days; but the nurse states, that this favourable change has only occurred within the last hour. A faint yellowness is perceptible upon the face, chest, abdomen, superior extremities, and thighs.

20*th October*, (*twenty-sixth day.*) There has been great improvement, since last report; the countenance has exchanged its yellow, for a leaden colour. He has taken one or two opium pills; and the nurse has instructions to administer them at short intervals, should the vomiting recur.

10*th November*, (*forty-seventh day.*) After last report, the irritability of the stomach gradually subsided; and he is now dismissed in perfect health.

The above reports comprise all the yellow cases treated by me, in the New Fever Hospital, except a very few slight ones, which not having been regularly reported, are only placed in the tabular views. From the tables it will be seen, that in many cases, epistaxis occurred, and in some profuse menstruation.

A number of interesting yellow cases have occurred to me, since I entered upon the charge of my wards in the Royal Infirmary; and an account of some of the more malignant of them are added in the Appendix.

CHAPTER III.

PATHOLOGY OF THE DISEASE.

The present epidemic possesses positive, and negative characters, strikingly distinguishing it from the fever which generally prevails in Edinburgh, viz.—

1. *The sudden and violent invasion of the disease.*

2. *Bronzing, leadening, or purpling of the countenance before and after seizure.*

3. *The almost uniform occurrence of one or more relapses.*

4. *The unusual number of cases with yellow skin, black vomit, and hæmorrhage.*

5. *The short duration of the pyrexial state, and its mode of termination.*

6. *The severe muscular and articular pain.*

7. *The rosy, elliptical eruption resembling measles is absent in almost every case in the present epidemic.*

Whilst these are the principal characters which distinguish the two epidemics, they also exhibit other marked differences; for instance, in that which now prevails,

8. *Severe vomiting is much more common; as are likewise gastric, gastro-hepatic, gastro-splenic, and gastro-enteric symptoms.*

1. *The sudden and violent invasion of the disease.*

In this, the present epidemic resembles that which prevailed here in 1817–20. Dr Welsh says, in his description of that fever,—"Frequently, the persons affected continue at their usual employment for some days, with languor, lassitude, aversion to motion, and loss of appetite; there are, besides, transient slight chills and flushings, after which, they are attacked with decided rigors, pain of the back, and other symptoms of fever. More generally, however, *the at-*

tack is sudden, the patient feeling previously no unusual sensation: sometimes, when at work, or getting out of bed, to which they had gone in perfect health the preceding evening; or, in short, after any unusual operation, they find themselves attacked with severe rigors, headach, pain of the back, nausea, and sometimes vomiting, or diarrhœa."[1]

The present fever comes on even more suddenly, than that described by Dr Welsh, which, however, we learn from his narrative now quoted, seized the patients much more unexpectedly, and far less insidiously than the true typhus, which of late years has been most familiar to us in Edinburgh; and a faithful account of which is given by Drs Henderson and J. Reid, in No. 141 of the Edinburgh Medical and Surgical Journal.

I have not found, that my patients described the attack as following " any unusual operation," and many of them stated, that they were taken ill, when engaged in their ordinary routine of domestic, or other occupations, lounging, eating, or sitting at the fireside.

From what I have seen, and read of the manner of the invasion of typhus fever in various epidemics, I regard the sudden and violent invasion of the present fever as characteristically different from the way in which that disease sets in.

2. *Bronzing, leadening, and purpling of the countenance before and after seizure.*[2]

This, as has been already mentioned, is to the visitor of our fever wards, one of the most remarkable peculiarities of the prevailing epidemic. Dr Maclagan upon one occasion remarked to me, upon entering one of my wards, that the bronzed countenances all around, strongly reminded him of the military hospital of which he had charge during the Walcheren epidemic. Others, again, familiar with the remittents and intermittents of Canada, the West Indies, and Italy, have assured me, that the facial bronzing bore a strong resemblance to what they have seen in persons affected with them in these countries. The more marked cases of bronzing brought to my own recollection the aspect of the inhabitants

[1] On the Efficacy of Bloodletting, in the Epidemic Fever of Edinburgh. By Benjamin Welsh, M.D. Edinburgh, 1819. 8vo, p. 16.

[2] Vide Cases XIX. and XX.

of such marshy districts of Italy, as the Pontine marshes, and the unwholesome swamps around the ruined temples of Pæstum.

Here also, there exists an interesting point of resemblance between the yellow fever of hot countries and our present epidemic.

The authors who have described yellow fever with most minuteness, mention a peculiar change in the colour of the countenance before it assumes the yellow cast. Audouard, in describing the Barcelona epidemic of 1821, pictures to the very life the way in which I have seen the yellowness come on in our present fever—the dingy bronzing or leaden hue as it were sliding into the yellow.[1] On the 5th day, he says,—"La face est de couleur plombée, tirant sur le jaune, et le tour des yeux légèrement ecchymosé; le globe de l'œil est plus jaune et moins rouge que la veille; le regard fixe et hébété, d' autres fois inquiet."[2] Blane, in describing the yellow fever, which he observed, evidently refers to something very similar to what was noticed in my cases. "There is something," says he, very peculiar in the countenances of those who are seized with this disease, discernible from the beginning, by those who are accustomed to see it. This appearance consists in a yellow, or dingy flushing, or fullness of the face and neck, particularly about the parotid glands, where the yellow colour of the skin is commonly first perceived."[3]

3. *The almost uniform occurrence of one or more relapses.*

Dr Craigie, in a paper on the present fever, which he has published in the Edinburgh Medical and Surgical Journal, says,—"The proportion of cases in which relapses or second attacks take place, is very considerable, so great indeed, that several observers believed, that they occurred in all the cases. I find, that from accurate accounts, kept of 182 cases, in 110, relapses had taken place, which is equivalent to $60\frac{4}{9}$ per cent. exactly." My experience differs widely from this statement of Dr Craigie, and leads me to say most confidently, that unless anti-periodic remedies are employed, one or more relapses will occur, with hardly a single exception; and further, that it is only in a limit-

[1] This peculiar appearance is so characteristic, that of late, I have predicted with unerring accuracy the appearance of the yellowness before a trace of it existed.

[2] De la Fièvre Jaune que a régné a Barcelone, en 1821, par M. F. M. Audouard, D.M.M. P. 60. Paris, 1822.

[3] Blane on the Diseases of Seamen,. 3d Edition. London: 1799 p. 419.

ed number of instances, that these medicines act as preservatives from relapses. A large number of the patients who have come under my care, have been dismissed as cured from the wards of the Royal Infirmary, and Fever Houses. Others again, of my own patients have had second, third, and fourth relapses at home, or in hospital, after leaving my wards. This generally happened in persons who had been dismissed at their own request, or sent out in consequence of the urgent demands made for admission, in behalf of severer cases. The same causes must of course have compelled Dr Craigie to dismiss from his wards many persons, who, had they remained longer under observation, would have swelled his catalogue of relapses. Be that as it may, I have hardly seen a single case, which has been under careful observation, between the thirteenth and eighteenth day of the disease, which has not had a relapse during that period:—a period of the disease within which a great number of dismissals have been made by other physicians, and occasionally by myself, though always with reluctance. The facts now stated explain satisfactorily the apparent discrepancy between my statistics, and those of Dr Craigie, which bear upon this point.

In reference to the same subject, Dr Craigie further remarks: "A third attack of febrile symptoms has been observed in a very small proportion of cases, I think not more than three in 346 cases, or less than one per cent. These third attacks were more frequent in Glasgow." Here again, my experience does not accord with that of Dr Craigie. Third attacks I have found to be exceedingly common; fourth attacks not very uncommon; and several instances have occurred, to my knowledge, of patients having a fifth attack.[1] One person was admitted under my charge into ward No. 6, in the Royal Infirmary, who had gone through three attacks in hospital before becoming my patient, two of them under Dr Craigie, and one of them under Dr Henderson. The fact is, that it is quite impossible to give correctly the statistics of the relapses, upon a large scale, so migratory are the patients between hospital physicians, dispensary doctors, and practising druggists. I have seen enough, however, to convince me,

[1] A man named Bird, whom I left in the New Fever Hospital, recovering from a second relapse, died there, the other day, exhausted after a fourth relapse or *fifth attack.*

that second attacks occur almost uniformly, and that one or more subsequent relapses are far from uncommon.

Dr Welsh, speaking of the relapses which occurred in the epidemic of 1817–20, says, that relapses occurred in one-fifth of the whole cases, but it also appears from his work, that in this statement, *the relapses only are included, which took place when the patients were under his own observation, in Queensberry House Hospital.* But even at Dr Welsh's estimate, the frequency of relapses in the fever which he describes, is sufficient to point out in this particular, another feature of strong analogy between it and that now prevailing. The recurrence of the attacks, though occasional in typhus, is rare, and can most commonly be traced to errors in diet, or some other indiscretion. Independent of any accidental exciting cause, the relapses take place in the present fever.

4. *An unusual number of cases exhibiting yellow skin, black vomit, and hæmorrhage.*

In the cases which I have reported, and also in those which I have treated since going to the Infirmary, these symptoms occurred very frequently. Dr Welsh tells us, that in the 1817–20 epidemic, " a yellowish or husky state of the skin was not unfrequently observed, but did not appear to be distinctly referable to any particular state of the liver, or other viscus, farther than the diffusion of bile among the different fluids usually indicates; for that such diffusion had actually taken place, appeared to be verified in all the cases of yellow skin in which any trials were made. In all of these, the patients' urine distinctly tinged linen cloth, or similar substances, immersed in it." P. 21. In another part of the same work, he says, " decided yellowness of the skin and eyes occurred in twenty-four patients, or one in $30\frac{2}{3}\frac{3}{4}$; and in all these cases, where the experiment was tried, the urine tinged linen. This symptom was observed in 4, or 1 in $8\frac{1}{2}$ of the fatal cases." It appears then, that the present epidemic resembles that of 1817–20, in the frequency of the yellow cases. I have been told by several friends who had experience of that fever, that the yellow cases occurring at present are much more malignant, than those which were seen in it.

Yellowness and black vomit have, by most writers, been taken as characters of special disease; and we find remittent and continued fevers, when prevailing epidemically, each described under the designation of yellow fever. A very cursory, if judiciously directed study of the literature of this disease, will convince any one, that the term "yellow fever" is applied to fevers differing essentially from one another in their character, constitution, and mode of propagation. Four years ago, I visited Barcelona, Gibraltar, Cadiz, and other towns of the Mediterranean, where the epidemic prevailed, described as yellow fever by Moreno, Louis, &c., and conversed with the physicians most conversant with the disease; and I never heard from one of them, as I find on reperusing my notes, any diagnostic characters of the fever, excepting the yellow skin and black vomit; though, in a majority of the fever cases occurring at that time, these symptoms were not seen. In ordinary conversation, the term may be allowed, but it ought to be banished from the scientific nomenclature of disease, inasmuch as yellow skin, and black vomit, black stools, and urine, and hæmorrhages, are consequences of congestion, liable to occur in fevers of all types, and countries. A few illustrations of this statement may be desired. They are therefore subjoined:

Dr Christison, in his work on Continued Fever, contained in the Library of Medicine, mentions "disorder of the hepatic system, accompanied with jaundice," as "an important, though rare complication." He says, that "it occurs chiefly in the autumn months, and principally in those epidemics, where the inflammatory type is prevalent. Yet it is important, because cases where it occurs commonly prove fatal. The exact nature of the affection is not apparent. The symptoms are rapidly formed jaundice, sickness, with frequent vomiting, but without particular uneasiness in the region of the liver, extreme prostration of strength, much tendency to coma at an early period of the fever, speedy sinking of the pulse, and in general, bilious stools. The symptoms show themselves in the course of the first week. If they do not begin to abate in two or three days, death occurs in a few days more, under a state of extreme exhaustion, and deep coma. Should the yellowness of the skin, however, begin to diminish, the

other secondary symptoms soon subside also, and the fever runs its usual course. Some have imagined this affection to be allied in nature to the yellow fever of hot countries, but with what justice it is not very easy to say."[1]

On the 7th of June 1843, Mr Henry D. S. Goodsir, of Anstruther, communicated to the Medico-Chirurgical Society of Edinburgh, a paper, entitled "*Account of a Form of Continued Fever, accompanied by Jaundice, which occurred in the Eastern District of Fife in* 1841–42*; with some Observations on the Gastro-Intestinal Character of the Endemic Fever of that District.*"

The prevailing type of the fever in that district differs from that of Edinburgh in its symptoms, and anatomical characters. The patients generally suffer from tympanitis and abdominal tenderness; and on dissection, are found ulceration, and occasionally perforation of the mucous membrane and glands of the intestinal tube: "Up to the year 1840, the symptoms and dissections indicated, that the local complication was confined to the solitary and aggregated glands of the ileum and cœcum. In 1841 and 1842, the disease, although still exhibiting the same mode of origin and propagation as in the more ordinary forms of continued fever, was almost always accompanied by jaundice, (occasionally very dark), urgent thirst, irritability of stomach, copious secretion of mucus in the throat and mouth, pain in the epigastric and right hypochondriac regions, obstinately confined bowels, with acute and continued headach. The pains which ushered in the disease were more distressing than usual, and were confined more to the joints, which generally became slightly swollen. After the skin had become yellow, the urine became deep, and the stools pale in colour, the skin itchy, with some decrease in the severity of the other symptoms. The pulse ranged from 100 to 150. There was generally, as in other forms of continued fever, more or less severe bronchitis."

A case of typhus came under my observation, in one of Dr Alison's fever wards, at the time when I was engaged as his clinical assistant, in which the patient, on the seventh day of the fever, after a well-marked remission of the symptoms (which had

[1] Christison. Article, *Continued Fever*, in Library of Medicine. London: 1840, p. 140.

been severe) was suddenly seized with jaundice, and black vomit. About 5 P.M., he took some whiffs of tobacco smoke from the pipe of a convalescent patient.[1] Shortly after this, he fell asleep, and awoke with a fit of vomiting, and pain in the abdomen. For twelve hours after this, he had incessant vomiting of black matters, and some epistaxis; at the end of which time he died unexpectedly in convulsions. Upon dissection, the bile-ducts were found to be pervious, and the liver healthy. The only other appearance which I have noted of this case, is, that the vena cava and heart were enormously distended with fluid, and frothy blood, a circumstance which, at the time, particularly arrested my attention, as the dissection was made within thirty hours after death, and during the intense cold of January 1838, with the thermometer below 20° Fahr. During the whole course of the case, the temperature was below the freezing point.[2]

What have been termed by some, sporadic cases of yellow fever, were seen in Paris, after the hot summer of 1822, which we are informed by Andral, were decidedly typhoid. In the autumn of that year, several cases of fever, accompanied with yellow skin and black vomit, occurred in the Hôtel Dieu, and at the same time two patients were similarly affected in La Charité.[3]

Dr Stokes, in the article *Enteritis* in the Cyclopædia of Practical Medicine, and Dr Graves in his Clinical Medicine, describe some cases of yellow fever which they treated in the Meath Hospital of Dublin, during the epidemic of 1827. The latter gentleman, in introducing the subject to his pupils, remarked, that "there is not so much difference between the diseases of Ireland and warmer countries as has been imagined. They differ, it is true, as to their degrees, but not as to their pathology."[4] Were this doctrine more generally appreciated, the accounts of the different fevers unfolded to us, in the oral and written compilations of our preceptors, and of what are termed systematic writers, would perhaps present less picturesque and piquant, but certainly simpler, and truer pictures of disease.

[1] The use of the pipe in the wards is contrary to rule.

[2] This case is referred to in my second pamphlet on Air in the Veins, entitled, Remarks on a Case of Suicide, &c. Edinburgh, 1838.

[3] ANDRAL.—Article *Typhus*, Dictionnaire de Médecine.

[4] GRAVES.—Clinical Medicine, 8vo. Dublin, 1843, p. 215.

In proceeding with the notice of the Dublin yellow fever, it may be first remarked, that in fifteen cases, Dr Graves could detect no difference in the symptoms which they presented, and those which characterize tropical yellow fevers. I quote the parallel which he draws, in his own words:—

"1*st*, In both, patients become yellow, from absorption of bile into the system; but observe, in epidemics of yellow fever, it never happens that all, or even most of the cases, turn yellow.

"2*d*, These yellow cases are here equally fatal.

"3*d*, Tenderness of the epigastrium and vomiting were present in both.

"4*th*, The strongest die.

"5*th*, Jaundice does not depend on hepatitis in either.

"6*th*, Nor on any permanent obstruction of the gall-ducts.

"7*th*, In both, the seat of the disease is a violent inflammation of the mucous membrane of the stomach and duodenum; dark purple, soft, and semifluid.

"8*th*, Black vomit in true yellow fever consists of a sanguineous fluid mixed with the vitiated secretion of the stomach and blood, this forms the coffee grounds. This *black vomit* we found in one of our patients' stomachs."

The statement, that violent inflammation of the mucous membrane of the stomach and duodenum is in both the seat of the disease, is, we must remember, an opinion, and not an acknowledged fact; but then, the observation that the mucous membrane of this part of the intestinal canal was found dark purple, soft, and semifluid, is of high value, being the record of physical appearances actually seen, and not matter of theory, but of history. In the yellow cases of the fever now prevailing in Edinburgh, this same altered state of the gastro-intestinal mucous membrane is found; but there is no lymph effused—nothing, in fact, indicative of inflammation, unless in some severe cases which linger long; in such I have seen inflammation around effused clots of blood, which seemed to have been the cause of this,—just as any other foreign body might act.[1] In my cases, also, the gall-ducts

[1] This observation is founded upon cases which I saw examined in the Infirmary, since the first part of this tract was printed.

were found pervious, and indeed, in all respects, the correspondence was complete between the symptoms of my cases, and those considered by Dr Graves common to the yellow cases which occurred in Dublin in 1829, and the yellow fevers of tropical climates. My cases differ in being remittent, in place of continued, just because the epidemic at present prevailing here is of the former, whereas, that which ravaged Dublin, when Dr Graves' cases occurred, was of the latter type.

Two of Dr Graves' cases are subjoined, to afford the reader the means of understanding the exact nature of the group. The observations which he appends to each are also given.

"John Gaven, aged 22.—This man's case differed in no material circumstances from the preceding cases.—*Dissection, twenty hours after death.* Body extremely well made, strong, and muscular. Nothing morbid in head or thorax, except dilatation of some bronchial tubes. There were five intus-susceptions in the small intestines, without any adhesions or marks of recent inflammation ;[1] other parts of the intestines are considerably contracted ; the mucous membrane of the stomach, from the cardiac orifice, to within about two inches of the pylorus, is of a brownish red colour. Here, the mucous membrane yields readily to the back of the knife, and may be scraped off in a semifluid state ; it contains several patches of ecchymosis. The whole of the intestinal tube, with the exception of the duodenum, and the lower half of the larger intestines, has its mucous membrane of a dark red colour, with numerous ramifications of vessels engorged with blood. In many parts, the mucous membrane is very soft, and almost semifluid. The liver is perfectly healthy, and there is no obstruction in the gall-ducts.

"*Observations.*—As our limits will not permit us to detail more dissections of this truly curious and fatal form of fever, we shall merely sum up some of the principal points connected with its pathology. 1*st*, In none did we find inflammation of the liver or obstruction of the gall-ducts. 2*d*, In *all*, evident marks of inflammation (?) were found in the mucous membrane of the sto-

[1] I never met with intus-susception so frequently mentioned by Dr Graves in the details which he gives of his yellow cases. It is sometimes noticed in tropical yellow fever.

mach, such as redness, softness, &c. 3*d*, In almost every instance, we found one or more intus-susceptions in the small intestines. 4*th*, All these were without any mark of inflammation of the serous membrane, and the invaginated portion of intestine could always easily be drawn out of the other. 5*th*, In *several*, we found effusion of a yellowish or amber-coloured fluid between the arachnoid and pia mater, at the base of the brain, and sometimes in the ventricles, but in these only in small quantity. 6*th*, In none, did we find inflammation of the brain or its membranes. 7*th*, We have found the spleen very much enlarged in almost all. When the spleen in acute cases is thus engorged and distended, it is invariably softer than natural. In but one case did we find a considerable quantity of a dark red fluid in the stomach, together with a good deal of a substance resembling coffee grounds, and in this case, the mucous coat of the stomach was in many places of a very red colour, and a slimy consistence, so that there could be but little doubt concerning the origin of the contained fluid and the coffee-ground substance, which must have proceeded from the diseased, and almost disorganised mucous membrane. Such have been the principal appearances observed during the dissection of about fifteen fatal cases of fever, combined with yellowness of the skin. The following cases will convey a more exact idea of the symptoms which characterise this form of fever than those already related, which proved too suddenly fatal to allow a full development of the symptoms.

"Peter Kelly, aged 28,—on the 29th December, was admitted into No. 4, fever shed, stating, that for two days previously, he had had severe cough without expectoration. Pulse 110, strong; face flushed; tongue white, and moist; pain across forehead, and general distress; great tenderness of epigastrium, and right hypochondrium; costive; thirsty; abdomen hard: on examination, no morbid *râle* was perceptible; the respiratory murmur was natural.—30*th December. Venesectio ad* ℥xv.—*Hirudines xx epigastrio.—Pil. purg. et mist. purg.*—31*st December.* Cough very severe.—*Vesicatorium pectori.—Mist. pectoralis.*—1*st January* 1827. During last night, he became jaundiced; considerable distress this morning; black stools; great tenderness of epigastrium and right hypochondrium; cough very troublesome.—

Venesectio ad ℥xij.—Hirudines xxx, hypochondrio et epigastrio.—Abradantur capilli, et applicetur vesicatorium vertici.—Sumat omni horâ, calomelanos gr. ij.—2*d January.* Much relieved; skin not nearly so yellow; tenderness greatly diminished; some sweat last night.—*Rep. pilulæ.*—3*d January.* Considerably improved; skin nearly natural.—4*th January.* Mouth affected with mercury; skin natural.—*Omittantur medicamenta.*—5*th January.* Removed to convalescent ward.—7*th January.* Convalescence continues; has now no complaint, but of slight soreness of the mouth.

" *Observations.*—Here the yellow colour appeared about the fifth day, and there was sweat attended with much relief on the seventh day. The symptoms chiefly worthy of notice are the violence of the febrile reaction, pains of the forehead, great tenderness of the epigastrium and right hypochondrium; blackness of the stools, and hardness of the belly. We shall just now see the great importance of these symptoms in determining the true nature of the disease." Pp. 206–208.

In certain circumstances, traumatic fever assumes all the characters of yellow fever.

Larrey mentions that many of the wounded of the French army at Cairo and Alexandria, were cut off by a fever marked by jaundice and black vomit.

Professor Sir George Ballingall, in a published Clinical Lecture,[1] delivered at Edinburgh in 1828, describes and illustrates this variety of traumatic fever, in a most interesting and instructive manner. The passage to which I refer is valuable, as tending to establish a point which I am anxious to make out, viz. that yellow skin and black vomit are not specific, but accidental characters of a fever.

In the passage referred to, Sir George remarks,—" One symptom, however, appeared early in this patient's case, which I did not fail to remark to my colleagues, and which, as far as my observation goes, is a circumstance almost uniformly foreboding a fatal termination; I allude to a peculiar yellow hue of the skin, which not unfrequently attends the symptomatic fever supervening upon wounds and operations; this has perhaps struck me more for-

[1] Quarto, Edinburgh, 1828, p.

cibly, from being familiar with a similar appearance in the idiopathic fevers of tropical climates; and although I have no wish to alarm the citizens of Edinburgh, by talking of a yellow fever in this part of the world, yet I am bound to state, for your instruction, that I have occasionally seen it here as well marked as I ever saw it at Seringapatam or Batavia, and, when supervening upon injuries, much more uniformly fatal.

"A case of this kind occurred some years ago, which made a deep impression on my mind, and which must have done so, I think, upon all those who had occasion to witness it; I allude to that of a seaman belonging to one of her Majesty's ships, in the roads, whose limb had been amputated below the knee, in consequence of an accident. The accommodation on board his ship being defective, and the vessel about to sail, he was brought ashore to this hospital, and placed under my care; here his stump sloughed, the symptomatic fever ran high, was attended with that dingy yellowness of the skin to which I allude, and in a few days he died. I observed to a surgeon of the ship who came ashore to see him dissected, that this case wanted nothing but the 'black vomit' to constitute a complete example of yellow fever; and it was found, on laying open the stomach, that this circumstance, necessary to complete the parallel, was hardly wanting; for here was a large collection of dark grumous fluid, resembling coffee grounds, which is so often evacuated from the stomach in tropical fevers."

Yellow fever has frequently broken out in ships in warm latitudes, as in our vessels in the Carribean Sea, and on the coast of Africa. When this occurs in harbour, it may, and often no doubt has been owing to the miasmatic influences there prevailing; but when we see the disease suddenly breaking out in a ship far from land, and when there has been no communication during the voyage, with any vessel or town where the fever was at the time, since leaving the Thames, or any other healthy port, then we must look for some other cause than contagion or marsh miasmata. In such cases, it has generally been remarked, that the ballast had been altered, or the hold rummaged for some particular purpose. This would obviously cause putrid miasmata to ascend through the ship. The stench and putrid odour on such

occasions is often terrible; nor is this to be wondered at, when we reflect upon the corrupted water, dead rats, and decayed animal and vegetable matter of all kinds, which is too often allowed to accumulate in the holds of vessels, and allowed to rot there unmolested for years.

Forget states in his *Médecine Navale*, (tom. ii. p. 197), that two French war brigs, a schooner, and a frigate, when cruising off the Antilles, changed their ballast, and that immediately, all of these vessels lost men from yellow fever. The Bedford, an English 74-gun ship arrived in Gibraltar Bay, in 1794, from the Mediterranean, with all hands on board in perfect health. In the course of one week, "after the shipping of the shingle ballast," 130 men were in the hospital affected with yellow fever. The disease was not prevailing at the time in the garrison, and no one attributed the visitation to contagion. Very few naval surgeons are contagionists, which is probably, in a great measure, to be attributed to their having had experience of such occurrences, as those we have now given examples of. Griffits of Philadelphia, designates yellow fever the ship fever of tropical climates. Dr Thomas Parke thinks that yellow fever may be produced by the morbific effluvia proceeding from the bilge water of vessels,—because, since 1793, he has always seen this disease commence at Philadelphia, near Delaware, and gradually extend to the west.[1]

The yellowness of the skin in yellow fever has been ascribed to general ecchymoses, and possibly, in some instances, it may originate in this cause; for Andral has shown, that it is this which produces the saffron colour of the skin, in what is impro-

[1] Hippocrates mentions a fever, which, from the symptoms mentioned, there is great reason to believe, was identical in its nature with some of the epidemics of yellow fever of modern times. In various passages, he speaks of the black vomit, which he regards as a mortal symptom; and in one place, he mentions a remittent fever, which he considered bilious, as raging in the Isle of Thasus, after a long continuance of hot weather. The patients were affected with nasal hæmorrhages and severe pains, and generally about the fifth day the skin became yellow.

In the *Definitiones Medicæ*, ascribed to Galen, there is a species of fever mentioned, called ἰκτεροώδης, in which the leading symptoms are said to be dry tongue, enlarged liver, and an exceedingly yellow skin. Some have supposed that the plague of Athens, described by Thucydides, and the *morbus niger* of the ancients, as well as various other pestilences of former times, were identical with what we call yellow fever.

perly called the jaundice of new-born children. I have noticed that in my cases, the yellowness was always most intense when the blood had been drawn to the surface by blisters, synapisms, or other means. However, if this explanation be adopted in regard to yellow fever, it can only apply to those cases in which the yellowness is partial, or limited to particular parts of the body. Moreno, Gillkrest, and others, have seen the sheets stained yellow with the perspiration; and this we could hardly expect, were it merely ecchymoses which discoloured the skin. Moreover, (as in the present epidemic), the fluid in the cavities, and the urine, have often a yellow tinge; and John Hunter states,[1] that the latter stains linen rags yellow, like that of a person in the jaundice. Fordyce attributes the yellow skin to a redundant secretion of sebaceous matter. Saunders believed that it depended rather "upon a particular state of the lymph in the cellular substance of the parts, than upon the absorption of bile into the circulating mass."[2] The most rational explanation seems to be, that it is the result either of an absorption of bile, or of its non-elimination from the blood. There may be instances in which the former is the cause; but when we remember the disordered state of the secretions, and the diseased condition of the blood, it seems more natural to conclude that the bile has either not been secreted, or secreted in very small quantity.

The bite of a particular kind of viper possesses the remarkable property of causing the skin to become deep yellow, and that some times, within the space of an hour. To produce this effect, however, the poison must be in a concentrated form, and actually introduced into the circulation. The primary effect, both of the poison of the yellow fever, and of the bite of the viper, seems to be upon the blood; and in both instances, there is a partial or complete suppression of the secretions. As intimately connected with this subject, it may be mentioned, that yellowness of the skin, yellow sweats and yellow urine, have ensued from eating certain kinds of poisonous fungi and fishes; and it may also be stated, that there is a remarkable resemblance in the effects produced by the poison of animal and vegetable putrid matter, and the poison-

[1] Observations on Diseases of the Army in Jamaica, p. 72.

[2] Saunders on the Structure and Diseases of the Liver, p. 104.

ous principle of certain fishes and fungi. Thomas states, that from the effects of the fish poison, he has seen the whole body become yellow, and the urine and sweat assume the same hue, the latter giving a deep yellow tinge to linen. He observed these symptoms in several cases; and particularly in himself from eating the pirea marina, a poisonous rock fish. The resemblance between the *post-mortem* examinations in cases of poisoning from fungi, to those detailed as characteristic of yellow fever, may be seen by consulting Christison on Poisons.

From a careful study of 200 cases, and the casual observation of twice as many more, I have found, that many had an interval of perfect health between the attacks, whereas others had only a remission,—that a number of both of these classes of patients had jaundice, hæmorrhages, and vomiting of black matters,—yet so distinct was the connecting link of cases between these groups, that it never occurred to me, (nor to any one else I suppose), to consider, that these variations in some of the phenomena, constituted two distinct fevers. Symptomatic distinctions are important in the regulation of the treatment; but, were they adopted in speaking of the pathology of the disease, would lead only to partial, and erroneous views. It is this arbitrary method of classification, and the dressed-up descriptions of systematic authors, which make it appear to the cursory student, that the fevers of tropical climates are different from those of this and other temperate countries, whereas were epidemics of different climates studied as they actually occur, it would be found that fevers "differ as to their degree, but not as to their pathology."[1]

The various hæmorrhages in our yellow cases are apparently as common as in the yellow fever of the Mediterranean, and in various epidemics of the West Indies. Moreno, speaking of the Cadiz fever, remarks, that profuse menstruation was a common critical flux, and that it often occurred at the crisis in women in whom the catamenia had ceased a few days before; he also states, that those seized with the fever when menstruating had a sudden stoppage of the discharge, with a recurrence of it to excess at

[1] As an illustration of the breaking up of an epidemic into different fevers, for the purpose of making a neat return, I subjoin one of the tables from the Army Reports referring to Jamaica, which is much more subject to yellow fever, and bilious remit-

the crisis.[1] Similar observations were also frequently made in my practice.

5. *The short duration of the pyrexial state, and its mode of termination.*

The general occurrence of the crisis so early as the fifth day, distinguishes this fever in a very marked manner from typhus. The termination in the former is also much more commonly indicated by sweating, or other critical evacuation.

In the fever of 1817–20, Dr Welsh says, that "most frequently no evacuation marked the crisis; but when any did make its appearance, it most generally took place by sweat, but, in a few instances, by diarrhœa, epistaxis, and great uterine hæmorrhage. Pustular eruptions, parotiditis, and carbuncle, were also occasional, though still rarer critical evolutions of the fever." All of these statements apply to the present epidemic, excepting the first, that most commonly the crisis is not marked by a critical evacuation. In almost, if not in all of my cases, it was otherwise, till within the last twenty days, when certainly several cases have occurred, in which the patients have slowly, and without notable crisis, passed into convalescence. All of these

tent, (which is arbitrarily separated from it), than the islands included in what are termed the Windward and Leeward Commands.

	Admissions.	Deaths.	Proportion of Deaths to Admissions.
Intermittent Fever, ...	6·090	37	1 in 165
Remittent Fever, ...	38·393	5·114	1 in 8
Common continued Fever, ...	1·971	86	1 in 23
Yellow Fever (Icterodes) . . .	20	15	1 in 1½
Synochus, ...	448	1	1 in 448
Total, . . .	46·922	5·253	1 in 9
Annual Ratio per 1000 of mean strength,	910	101·9	

The cases styled remittent fevers might very often, with as much propriety, have been called yellow fever; and in the other classes, difficulties would occur as to the distribution.

[1] Moreno.—Ensayo Medico-Practico sobre el Tifus Icterodes, fiebre amarilla comunmente dicha, &c. Cadiz, 1813. "*La evacuacion mestrual en el bello sexô, aparece en los mas de los casos, ... aun en aquellas mugeres en quienes habia cesado pocos dias ántes; y en las que eran invadidas en un tal estado, la evacuacion cesaba, volviendo á veces á presentarse pasados los momentos del espasmo periferico.*" P. 44.

cases, however, were of the continued type, and gave no symptoms of convalescence, earlier than the thirteenth, and some of them so late as the twenty-first day.

A copy of the Medical Gazette for the 24th November has just been received, in which I find a very valuable paper, by Dr Mackenzie, on the fever now prevailing in that city, which is quite the same as our own.[1] The following extract, which it contains from Dr O'Brien's description of the Dublin epidemic of 1826, may be here appropriately introduced, as it describes a fever very similar to that which forms the subject of this essay:—

"The other species of fever, or that of the new constitution, which constituted the bulk of this epidemic, was one of short periods, terminating in three, five, seven, or nine days, but the second of those periods was the most frequent." . . . . . "In this fever the chain of morbid actions was rapidly formed and rapidly terminated, and the disease developed itself with energy from the commencement. The access was sudden, and usually came on at mid-day. The person, previously in perfect health, would then be seized with sickness at stomach, headach, pain in the small of the back, and chilliness. On the approach of evening all these symptoms increased, and the febrile paroxysm was fully formed; the chilliness increased to a rigor, and the nausea to vomiting, which harassed the patient for the first three or four days of his fever in the form of an empty straining, and frequently continued through its whole course. On the evening of the fifth or seventh days, the *exacerbatio critica* commenced, which, mostly with the intervention of a rigor, but very frequently without this symptom, terminated in a profuse perspiration, which continued through the night, so that on the following morning the crisis was complete, and we generally found the patient convalescent. We frequently received the glad tidings from himself in the following words: 'Sir, I got the *cool* last night.' The *cool*, however was sufficiently visible in his countenance, before he opened his lips; but unfortunately, in many instances, it proved only a delusive truce to his sufferings. The patient was destined, perhaps, to be harassed by one, two, or three relapses, which prolonged the whole duration of his illness even beyond that of

[2] Dr Mackenzie's paper is *valuable*, though all the statements which he makes are not correct.

the most protracted typhus. In fact, the liability to frequent relapses was one of the most striking characteristics by which this fever was distinguished from all previous epidemics, at least which happened in our time.

"Relapses, generally speaking, were milder and shorter than the original fever; but to this many exceptions occurred. The general symptoms of the summer variety of this fever, in addition to those already mentioned, were—acute headach; delirium, always active, sometimes phrenitic; rapid, and hard pulse; white tongue, with florid edges, but sometimes natural; muscular and arthritic, rather than deep-seated pains, or, as they are termed, 'pains of the bones,' not accompanied, however, by swelling of the joints, except in a few instances; the skin in many cases of a light yellow tinge, and sometimes, though rarely, assuming the intense icteroid yellow, characteristic of jaundice, and true yellow fever."[1]

6. *Severe muscular and articular pains in the disease, and during convalescence.*

This is, in several points of view, a very interesting peculiarity of the present fever. The patients have acute rheumatic attacks, and occasionally acute pain in the feet, just like those which were affected with the epidemic of 1817–20, as we learn from Dr Welsh. "A very common symptom, occurring sometimes in the disease, but oftener during convalescence, was rheumatic pain of the joints, which occasioned considerable annoyance to the patient, and was removed with difficulty. Severe pain of the feet, with slight œdema, was likewise observed in a few cases in the stage of convalescence." P. 18.

[1] "In Rutty's History of the Diseases of Dublin during forty years, we meet with several instances of an epidemic, of the same character with that now under consideration. Thus in July, August, September, and October, 1739, a fever prevailed, which was "attended with an intense pain in the head. It terminated," says he, "sometimes in four, for the most part in five or six days, sometimes in nine, and commonly in a critical sweat: it was far from being mortal. I was assured of seventy of the poorer sort at the same time in this fever, abandoned to the use of whey and God's good providence, who all recovered. The crisis, however, was very imperfect, for they were subject to relapses, even sometimes to the third time." (p. 75.) He describes the same remittent fever as occurring also in 1740, 1745, 1764, and 1765; noticing as a circumstance of the disease in 1765, that the bowels were in some instances remarkably affected."—*Mackenzie in Medical Gazette.*

I have found the arthritic and general pains in the jaundiced cases, to be most severe;—an observation worth recording, from the connexion which subsists between jaundice and rheumatism, as has been particularly adverted to by Dr Graves.[1]

I find articular pains, mentioned by Don Francisco Flores Moreno, as having occurred in the yellow fever which prevailed at Cadiz, in 1800, 1804, 1810, and 1813. This acute observer remarks: "Another symptom not mentioned by any author, and which has often been noticed on the 6th day, as indicative of a favourable termination, consists in acute pains in the various articulations, particularly in the wrists, preventing all motion on the part of the patient. They have never continued after the night of the 7th day, when this affection has terminated in a restoration to health, or in a true ataxy ending favourably."[2] In the present Edinburgh epidemic, the muscular and articular pains are also most severe in the commencement of convalescence.

7. *The rosy elliptical eruption resembling measles is absent in almost every case in the present epidemic.*

Certainly, one of the most remarkable distinctions between the symptoms of the epidemic which now prevails, and that which has been common in Edinburgh for a number of years past, is the absence, with some rare exceptions, of the rosy, elliptical, and elevated spots resembling measles, which disappear on pressure, and return when the pressure is removed. At the time when Dr Alison published his short account of the present epidemic, he had not met with any cases of the new, or "short fever," as he terms it, in which measly eruption was seen, a circumstance not at all remarkable, considering the early date of his paper, and the extreme rarity of this occurrence.[3] The early

[1] Clinical Medicine, p. 564.

[2] Moreno.—Ensayo Medico-Practico, sobre el Tifus Icterodes, fiebre amarilla, comunmente dicha, &c. Cadiz, 1813. The following is the passage quoted in the text: "*Otra senal ha solido presentarse en el dia 6° de la enfermedad, (de la que no se haya hecho mencion algun autor), y la qual anuncia la favorable terminacion de ella. Consiste esta, en unos vivos dolores de varias articulationes y principalmente de las munecas, que impiden todo movimiento al paciente, mas nunca han pasado de la noche del dia 7° en al que con tal síntoma ha terminado siempre la enfermedad en salud, ó en una verdadera ataxía cuyo exito ha sido favorable.*" P. 60.

[3] The passage in Dr Alison's paper, to which reference is made in the text, is as

date of Dr Craigie's paper also accounts for his making an even stronger statement on this subject, viz.,—" no eruption of spots is observed similar to that observed in genuine typhus."[1]

To give a correct idea of the striking nature of this difference between the two fevers, I may quote what Professor Henderson says in the report made conjointly by himself and Professor Reid regarding the epidemic fever in Edinburgh. He says, that " 130 cases of both sexes were specially inspected with reference to this eruption. In 108 cases, the eruption was found; in 22, it was not found. Six of the 22 were not admitted till between twelve days and three weeks from the beginning of the fever; therefore, as will appear from what follows, it cannot be concluded that they had not had the eruption at an early period. Of the 16 cases in which no eruption existed at any time, the greater number were slight cases; one only could be termed a rather severe case, extending to the 15th day.[2] Dr Craigie observed the typhoid eruption only in 79 out of 169 cases.[3]

Many observers have reported upon the presence of the eruption in the contemporaneous Glasgow fever of that period, and it appears, that it has there been very carefully looked for, and very generally observed. Dr Cowan, in 1835–36, found, that in 2000 cases, $73\frac{99}{100}$ per cent. admitted had the eruption. Dr Perry, another Glasgow physician, considers contagious typhus to be an exanthematous disease, like small-pox, measles, and scarlet fever.

We find a similar opinion entertained by most modern physicians, either in a limited or unlimited way. Dr Alison, writing, in 1827, of the Edinburgh fever, says that the measly eruption is a symptom occurring in the majority of cases, and that the fever characterised by it is a connecting link between continued fever and the contagious exanthemata. This opinion is probably correct. It is not, however, my object here, to adduce arguments for or against any particular view of the pathology of

follows:—" None of those cases running this short course have shown the true febrile eruption, resembling measles, although many have shown petechiæ, or circumscribed purple spots, originating in flea-bites, and extending apparently by little ecchymoses."—*Scottish and North of England Med. Gazette*, No. i. p. 1.

[1] Edin. Med. and Surg. Journal, Oct. 1843, p. 411.

[2] Ibid. No. 161, for Oct. 1839, p. 437.

[3] Ibid. Vol. xxvii. p. 301.

typhus fever, but simply to show, that the absence of measly eruption in the present epidemic does indeed distinguish it, so far as this character is to be regarded as diagnostic, from typhus, which is the most common form of continued fever in Edinburgh, and other places. And further, that its *general* absence, and *occasional* presence, are both points of resemblance between it and the epidemic of 1817–20, described by Dr Welsh, and which, in all its leading features, is identical with the present. That gentleman says, that "a measly-looking efflorescence on the skin was occasionally observed" in that epidemic.

While the almost universal absence of the typhoid eruption presents an obvious difference between the phenomena of the ordinary and present epidemics, yet, its occasional presence suggests to us the important inquiry, whether the two fevers, though apparently so different, are not the results of modifications of the same morbid poison?

On this subject Dr Alison remarks: "It is a curious and interesting question, whether this kind of fever has proceeded from the same poison as the usual typhoid fever of Edinburgh, or is truly a separate disease? It is quite certain, that the one has succeeded the other, within narrow limits, both of time and space, in different parts of the town; and I have seen two instances, in which strictly typhoid cases, with the characteristic eruption, have been brought in from the same rooms, in which a succession of the milder cases have occurred at the same time. But, on the other hand, I am aware of several cases, carefully investigated by my friend and colleague, Dr Henderson, in which a succession of protracted typhoid cases has been traced to one room, while all the cases in the neighbourhood have been of the mild and short fever. And one man under my care, after passing through a protracted typhus, with the characteristic eruption, and threatening of ulceration of the bowels, relapsed, with the symptoms of the usual epidemic, of which cases were lying beside him, and had the usual crisis, and second relapse,—so that he might be said to have gone through both diseases in their present form, before leaving the ward."[1]

We find the ordinary eruptive typhus driven from the field;

[1] Alison.—Scottish and North of England Medical Gazette, No. i. p. 3.

—the present form of fever gradually springing up as the other decreased. I am aware, that it has been alleged, in conversation, by some physicians, that the few cases which have presented the rose-red fever eruption did not relapse,—were of the continued type,—and, in fact, were cases of a different disease. To this opinion, I was also at first strongly inclined, more especially, as it was currently alleged, that these cases could be traced to *foci* of contagion, where the same form of the disease prevailed. This opinion, however, is not tenable. It may be true that the cases of what are termed "true typhus," come pretty generally from the same houses; but then, do they not come also from the same families? May it not be peculiarity of constitution in these individuals, which determines this particular manifestation of the morbid poison? Though the constitution of an epidemic gives to it a character, yet idiosyncrasy causes families and individuals to be affected differently from the generality of persons. Who will maintain that the scarlatina poison does not produce mild cases, without sore throat and eruption, as well as those with one or both of these characters?

Now, no person who saw the rosy spots in the case of Mary Wallace, *on their first eruption*, could say, that it was not the true measly typhus eruption; and yet, the bronzing, purpling, and jaundice, along with the urgent vomiting, rheumatic pains, and the relapse at the usual period, proclaimed unequivocally, that she was afflicted with the prevailing epidemic; or rather, perhaps, a sort of bastard between the two forms of fever. She took the fever in the hospital, where, at the time of her seizure, there was not a single case that either had, or had had typhus eruption. Facts are wanting, to enable us to speculate with advantage upon the question, as to whether all of those occasional cases with eruption proceed from the same poison as those without it; but this, at all events, can be stated, that *there is such a thing as persons being occasionally affected with the measly eruption, in addition to the usual symptoms of the present fever;* such persons, moreover, apparently getting the disease from a contagious poison evolved from, or generated by persons congregated together, affected only with the prevailing form of the fever.

When I commenced the observation and study of the present fever, and indeed for a considerable time afterward, I regarded it

as *essentially, and totally*, different from typhus; but recent circumstances, and more matured weighing of evidence, have greatly modified this opinion. In the case of Mary Wallace, a bastard fever was distinctly recognised; and as the season advanced, all the cases have been more characterized by depression and general typhoid symptoms. The cases of continued fever, with and without measly eruption, are becoming more common in Edinburgh, and also in Glasgow, as Dr Weir of the Hospital there informs me.

If some think, that on this point there has been exhibited an undue reluctance to enter fully upon an important pathological inquiry, I beg to remind them that data are yet wanting to entitle us to discuss it fairly, and with profit. This may be attempted in a subsequent publication, at the close of the epidemic; in the mean time let the remark of Rousseau be remembered, "that the truth is in the facts, and not in the mind which observes them;" and it is hoped, that some important facts have been even here communicated as contributions to this part of the pathology of the fever.[1]

8. *Severe vomiting is much more common, as are likewise gastric, gastro-hepatic, gastro-splenic, and gastro-enteric symptoms.*

Even in the mild cases, more or less pain of the epigastrium and vomiting are general symptoms. They have been urgent in the majority of those whom I have treated, both in the New Fever Hospital, and subsequently in the Infirmary. They have not always gone together; and even in some fatal cases, in which the black vomit occurred, there was no pain or tenderness of the epigastrium.

In the mild cases, the matters vomited are generally the ingesta tinged with green, of various degrees of intensity. If the patient drinks incessantly, which is usual, the deepness of the green is less intense, from the immense quantity of fluid which is constantly being taken into, and at once ejected from the stomach, diluting the colouring matter; for it is very common for every thing, as soon as swallowed, to be discharged.

[1] An eruption like scarlatina, as well as other eruptions, has been observed by Dr Rush, in yellow fever.

In the most malignant of the yellow cases, there is sometimes a fine inky sediment in the vomit; at other times, the grounds are grumous,—in consistence, like the thick part of hare soup, and varying in colour from dark-brown to black. In a fatal case which occurred to me the other day, there was a thick matter at the bottom of the vessel, resembling the dark-green mud which collects in pools of stagnant water. Upon repeatedly washing this sediment with water, the green colour was almost removed, and what remained was like the grounds of hare soup.

The grumous matter of the black vomit, in its various forms, is unquestionably blood extravasated from the capillaries of the stomach, and chemically altered by the action of the acids of the stomach upon it. That the black vomit is altered blood, has been again and again demonstrated at our autopsies, by tracing it to the sources of its extravasation, and finding large clots of blood in the submucous cellular tissue of other parts of the intestines in the same cases. The black colour is probably produced by chemical action between the acids of the stomach, and the iron of the blood.

The reader will be the better able to judge of the correctness of these remarks on the source of the black vomit in the present fever, by perusing the reports of cases already detailed, but particularly of some which I have had in the Royal Infirmary, to be added in the Appendix.[1]

[1] The following note by Dr Gillkrest on the black vomit is interesting: "Dr Bone, who seems to have paid much attention to the examination of the fluids ejected from the stomachs of persons labouring under yellow fever, describes them thus: '1st. The contents of the stomach at the invasion of the disease. 2d. The fluid drunk, mixed with green or yellow bile. 3d. The fluids drunk, without any admixture or change. 4th. A fluid like indigo or China ink, brought up with some straining: I suppose it to be bile, for it coagulates with spirits of wine. 5th. A brown fluid, resembling urine in appearance. 6th. Brownish blood, not flaky, proceeding from the fauces and gums, and perhaps partly, in some cases, from the pulpy cardiac opening of the stomach. 7th. Brown flaky blood, mixed with mucous matter, proceeding from the gums, fauces, and stomach, usually the precursor of the real black vomit. 8th. The *real black vomit*, which also is blood altered by its passage through the vessels of the villous coat.' At Gibraltar, in 1828, we were led to consider '*black vomit*' under the following forms: 1st. In thin flakes or portions of a brownish black colour, floating, like broken-up wings of a butterfly, in a glairy fluid, or in a fluid resembling an infusion of black tea. 2d. A perfect resemblance to a mixture of soot and water, or to the contents of a coffee-pot when the clear part of the coffee has been poured off.

What is said by Blane, of the affection of the stomach and vomiting in the yellow fever of tropical climates, applies to our present yellow cases. " In all stages," says he, " of this disease, it is the affection of the stomach that affords the most distinguishing and important symptoms. As it advances, an unconquerable irritability of this organ comes on. Whatever is swallowed, whether solid or fluid, of whatever quantity or quality, is immediately rejected by vomiting. An almost incessant retching takes place, even without any extraneous irritation, which commonly on the third day ends in what is called the *black vomit*, the most hopeless of all the symptoms attending it."[1]

The acute pain which many patients complain of, when pressure is made over the stomach and duodenum, seems, in the majority of cases, to depend on flatulence alone. At all events, when accompanied by gaseous distension, which it generally is, I have found far more advantage derived from turpentine enemata, carminatives, and fomentations, than from leeches.

Fulness of the liver has been noticed during life, in several cases: but not so frequently, as the same affection of the spleen.

Congestion of the spleen has occurred in a considerable number of cases. From the great enlargement of the organ, and the pain which the slightest pressure over it excited, I at first treated the affection as acute splenitis, but more careful consideration has now induced me to regard it simply as a congestive affection; especially from the enlarged spleens which I have had an opportunity of examining after the death of the patients, presenting congestion only. The enormous congestion of this organ has as little to do with inflammation, as any of the other congestions met with in the fever.

As a good example of this complication of the fever, the fatal case of Daniel Lamb (to be given in the Appendix) is referred to.

3d. A homogeneous, intensely black substance, having a jelly-like consistence, and adhering in great abundance sometimes to the mucous coat: this, though never *vomited up*, and therefore more properly belonging to the *morbid appearances*, it is thought may not be altogether out of place here:—it is rarely found in the stomach, the intestines being much more commonly its seat. A simple test of true *black vomit* has been proposed, which is dipping into it white paper, which it does not tinge."--*Op. cit.* p. 274.

[1] Blane.—Diseases of Seamen. London, 1799, p. 410.

The subjoined case will point out what the splenic symptoms commonly were, in those who recovered from congested spleens. At the time of its occurrence, it was believed to be inflammatory.

CASE XXV.—SUMMARY.—*Coma on the 8th day.—Relapse on the 14th day—enlarged and tender spleen on the 18th day—sweating and sudamina on the 19th. Treatment; leeches, tartar emetic, &c. Recovery.*

James Pugh, a native of Edinburgh, aged 15, from Hamilton's Close, Grassmarket, was

Admitted, 7th August, (*sixth day.*) His mother states, that he is an apprentice to a tobacco manufacturer, but that he has been out of employment for the last six months, and during that time his food has been scanty. He had fever six years ago, and was treated in the Glasgow Infirmary. No one is aware of his having been exposed to contagion.

He took ill on the 2d August with rigors, headach, pain of the back, and loss of appetite; and since then, languor and restlessness have been superadded. There is no fever eruption.

9th August, (*eighth day.*) Since he came into the Hospital, he has had purgatives, and a little wine. On admission, he was speechless; and he can now only with difficulty be roused to answer questions. The bowels are slow: he complains of acute pain in the precordial region, and pressure on this part augments it.—*Applicentur hirud. iv parti dolenti.—Habeat vini rubri ℥iv.—Sumat statim olei ricini ℥j.*

Vespere.—He is much more lively, and the countenance is almost natural, as are also the tongue, skin, and pulse.

15th August, (*fourteenth day.*) *Relapsed.* The wine was omitted on the 11th. Since last report, he has been gradually improving in every respect till to-day, when he has had a good deal of feverishness, and headach, but no rigors.

18th August, (*seventeenth day.*) On the evening of the 16th, and last night, he had sweating without any rigors. He has a good deal of abdominal tenderness; no enlargement of the liver or spleen can be detected. The bowels are regular; the pulse is 100, of good strength; the urine copious, and the appetite good.—*Admoveantur hirudines iv parti dolenti. — Habeat, horâ somni, pulveris Jacobi veri gr.v.*

19*th August*, (*eighteenth day.*) Yesterday, between 3 and 4, P.M., he had a good deal of sweating, but he has had none since then. The leeches bled well, and have removed the pain from the part to which they were applied. The spleen can be distinctly felt to be enlarged, and to extend downwards an inch and a half below the ribs; there is pain, on pressing over it. The diaphragm descends less freely than naturally. The countenance is flushed; the respirations are 24; the pulse is 120, and sharp; the skin is hot, and dry; the tongue is clean, but dry; there is much thirst; the bowels are regular. He slept well last night.—*R. calomelanos gr.iv, pulveris antimonialis gr.v. Misce. Habeat horâ somni.—Habeat sulphatis magnesiæ ʒiij, ex aquâ, cras mane.—To have a bottle of ginger beer.*

20*th August*, (*nineteenth day.*) He slept well last night. The powder was administered at 10 P.M. He began to sweat at 6 A.M., and still continues perspiring profusely. On the abdomen, sudamina are distinctly perceptible. There is no pain in the region of the spleen, and much less turgidity of the organ. The pulse is 80, and feeble; the tongue clean and moist; he has great thirst, slight headach, and much debility.—*Quiescat.*

21*st August*, (*twentieth day*). The sudamina, observed yesterday, are equally visible to the eye, but not so perceptible to the touch. He has had no more sweating. He complains of general headach, and intolerance of light. The lachrymal secretion is deficient, and the pupils are much dilated. There is general abdominal tenderness, especially in the region of the spleen. The bowels have been opened twice. He has taken no medicine since the 19th.—*R. aquæ acetatis ammoniæ ʒvi, tartratis antimonii et potassæ gr.i, syrupi simplicis ʒi.—Misce. Sumat ʒi ex aquâ, 3tiâ q. q. horâ.*

22*d August*, (*twenty-first day.*) He slept well last night, and feels more comfortable to-day. The headach is less; the bowels are open. He had some sweating during the night, and the skin is at present moist.—*Continuatur mistura.*

24*th August*, (*twenty-third day.*) Has been doing well since the 22d, and has now neither headach nor abdominal tenderness. The skin, tongue, and expression are natural. The appetite is improved. The pulse is 80, and deficient in strength.—*To have common diet.*

11*th September*, (*forty-first day.*) Since last report, he has

been steadily improving, and since the 29th, has had full diet. He is now dismissed, quite well, and not complaining of feebleness.

Gastro-enteric symptoms are, in general, obviously referable to the congested and irritated state of the mucous membrane of the stomach and bowels. There seems good reason, also, to believe, that in many cases they are aggravated by loose clots of effused blood, and the vitiated secretions themselves, which acting as foreign bodies, tend still farther to increase the irritation. This accounts, probably, for the protracted diarrhœa in some severe cases which recovered. Much of the pain, however, which is complained of in the bowels arises from gaseous distension: we see it occurring, in some of the mildest cases, to a great extent.

A few other of the most important points in the pathology of the disease must be noticed. Those to which it is proposed to advert, are,

1*st*, The state of the blood;

2*d*, The origin and mode of propagation.

3*d*, The structural lesions caused by the fever;

1. *The state of the blood.*

There seems good reason to believe, that a number of individuals, who do not actually succumb under the influence of the epidemic, are nevertheless affected by it in a marked and characteristic manner, such as by slight chills and sweatings, some headach and vomiting, with prostration of strength. All of these symptoms, in a mild form, may occur combined, or some of them only may be present. In one instance, in which the whole of the group of symptoms occurred, along with bronzing of the countenance, they entirely disappeared within twenty-four hours, an emetic having been given three hours after their invasion. The patient, referred to, is the nurse Margaret M'Kenzie, who, at a subsequent period, went through a well-formed ordinary attack of the disorder. The other occurred in my own person; the symptoms entirely disappeared, after a two days' absence from Edinburgh, in the Highlands of Argyleshire. It would be easy to multiply illustrations of this description; but it is not necessary, as most persons are willing to admit, that ephemeral and ill-formed cases are by no means uncommon during the prevalence

of every epidemic. Probably, change of air, either alone or conjoined with the use of certain remedies, such as Labaracque's chlorinated solution of soda, might, in a considerable number of cases, have proved sufficient to ward off, or, perhaps more correctly speaking, to arrest the disease *in limine*. This belief is principally grounded upon the fact, that for some days before there exists any other evidence of the presence of the disease, the countenance assumes a peculiar premonitory hue, indicating, I apprehend, a dissolved state of the blood, and a want of tone in the capillary vessels. When the vital fluid is still more dissolved, in the subsequent stages of the disorder, we also find an increased ability to circulate in the capillaries, from the enlarged calibre or relaxed state of these vessels,—disabling the organs of secretion from performing their functions from congestion; as is frequently manifested by the scanty urine and yellow skin, which latter symptom, as the cases detailed sufficiently prove, does not arise from any obstruction in the biliary ducts, but depends upon the bile not being separated from, or being reabsorbed by the blood. Another class of symptoms, produced by this capillary congestion, is hæmorrhage from the mucous membranes, with occasional black vomit.[1]

That the blood really is in a dissolved state, was made perfectly manifest to us, *first*, by the imperfect coagulation which it underwent when drawn from the veins of patients, a homogeneous spongy mass being formed, in place of a firm fibrinous clot, with a supernatant serosity; *second*, by the ecchymosis which was uniformly observed to surround flea-bites or other slight injuries of the skin; *third*, the frequent occurrence of purpurous spots; *fourth*, the hæmorrhages; and, *fifth*, the discoveries made by the microscope.

Professor Allen Thomson had the goodness to lend me his able assistance, in examining the blood of a number of my patients, by means of the microscope. A few drops were taken from the thumbs on the same day (24th Oct.), of about a dozen persons, some of them in the pyrexial, and others in the apyrexial stage of the disorder; and it was found, that in all of them, there were an

[1] For some valuable remarks on the state of the capillaries in fever, see Dr Craigie's learned work, on the Practice of Medicine.

unusual number of pus globules; and in some cases, in addition to this, all the globules were found serrated and notched. One gentleman present upon this occasion, was observed to have his blood exactly in the same state as the fever patients, and within two days he was seized, and went through two mild attacks, or to use conversational phraseology,—*the fever and the relapse.* The blood of some other healthy persons was also examined at the same time; it exhibited nothing unnatural, and none of these latter individuals have taken the fever, although more than a month has now elapsed since the observation was made.

I have been told by Dr Douglas Maclagan, that he has detected urea in the fluid found within the ventricles of the brain, and in the blood of one or two of Dr Henderson's fever patients, in whom he looked for it, at that gentleman's request. The observation is one of great interest, but not different from what might have been anticipated. Since an early period of the epidemic, I have treated a certain class of head symptoms by cupping in the lumbar region, and diuretics, from a belief that urea was circulating with the blood, in consequence of the kidneys being incapable, from congestion, of exercising their function. I apprehend, however, that urea is seldom *abundant* in the blood of our fever patients, as it is extremely rare to meet with symptoms at all resembling those known to characterize the peculiarity of its action as a poison, especially resembling foxglove in its effects; and according to the concurrent testimony of many, such are the toxicological manifestations of urea, when administered to animals as a poison, or to the human subject as a medicine.[1] The muscular and articular pains may possibly depend on urea.

Dr Stevens has particularly described the morbid character of the blood in yellow fever. In the days of exclusive humoral pathology, it was pointed out by many, that the blood was in a dissolved state in this and other fevers; but it is only recently, that attention has been recalled to the fact. Dr Mitchell mentions, that, in the yellow fever of Virginia in 1741, "blood drawn from a vein was invariably dissolved; the same state of the blood

[1] Urea is composed of oxygen, 26.54; hydrogen, 6.71; carbon, 20.02; azote, 46.73. It has been used in diabetes; when we recollect its highly azotised constitution, it is not wonderful that it proved useful. Some suppose urea to be diuretic in doses of gr.xv. to ℈i, but there is no good ground for this belief.

was always observed in many persons who had been exposed to the miasmata who discovered no other symptoms of the disease." On the fourth day after the attack, Dr Mitchell uniformly took a few ounces of blood from the temporal artery, when he constantly found it dark and venous-looking. Dr Potter of Baltimore, Dr Copland, and others, have recorded many similar experiments.

2. *The origin and mode of propagation.*

That the prevailing is strikingly different in its phenomena from the ordinary fever of Edinburgh has been already fully established; although, purposely, no dogmatical opinion has been expressed, as to whether the morbid poison which causes the present disease, be or be not that which gives rise to the true exanthematous typhus, merely modified by the operation of other poisons, terrestrial, atmospheric, or imported.

Regarding the progress of the prevailing disease in this country, since its first appearance, at least twelve months ago, in Dundee, Greenock, and elsewhere, I have collected some interesting data, which, should I have leisure and ability to add to, may serve to throw some light on the history of its progress. In the mean time, it may be intimated, that facts are not wanting to give colour to the belief, that the disease has been imported into this country: but certainly, I have heard of none which do more than this.

The disease is contagious. Of this we have sufficient evidence in the fact, that almost all the clerks, and others exposed to the contagion, have been seized. Dr Heude, and his successor Mr Reid, in the New Fever Hospital; Dr Bennett, my successor there; Mr Cameron, and his successor Mr Balfour in the adjoining Fever House; as well as most of the resident and clinical clerks in the Royal Infirmary, have gone through severe attacks during the past summer and autumn. Hardly any of the nurses, laundry-women, or others coming in contact either with the patients or their clothes, have escaped; at one time, there were eighteen nurses off duty from the fever; and of those who have recently been engaged for the first time, or of those who have hitherto escaped, one and another is from time to time being laid up.

It may be fairly objected, that while these illustrations incontestibly prove that the disease is contagious, they do not give a fair view of the degree in which it is so, inasmuch as all the individuals specified were not only much exposed to the poison, but were also, from the laborious nature of their respective duties, peculiarly predisposed to succumb under its influence. It is admitted, that fatigue is a predisposing cause; and also, that the contagion is rendered infinitely more dangerous by the *consortus ægrotorum*, even in well-ventilated fever wards, than it is in other circumstances.

Long-continued exposure to the poison seems also to operate most evidently against the chance of escape, as we find that comparatively few of the Dispensary medical officers and pupils—a very numerous class—have taken the disease. These gentlemen are much exposed to the fever, and undergo a great amount of fatigue; but they are generally with their patients only for short periods, and have constant opportunities of inhaling an uncontaminated atmosphere.

I have seen and heard of a considerable number of isolated cases, of various degrees of severity, in the best districts of the New Town; but have never yet known of an instance of the disease propagating itself in these localities. The same observation has been made by several medical friends, at whom I have made inquiries on this subject. That at a more advanced period of the epidemic, it may gain a footing in the New Town, would not be at all remarkable, considering the unrestricted intercourse between the poor of the infected, and the wealthy of the uninfected districts. Besides, the midnight labours of the gay season will soon be in operation as a predisposing cause.

Those London physicians who have had the best opportunities of observing typhus fever, believe, that the poison in which it originates, does not extend for more than three or four feet from the patient; or, at all events, that at a greater distance, it becomes so diluted by the atmosphere, as to be innocuous.[1]

[1] Believing in the certainty of this law, the fever patients are distributed (with impunity, it is said,) throughout the general wards of most of the metropolitan hospitals, care being taken, that they are placed at due distances from each other, and from the rest of the patients. If these fever patients are too numerous in the ward, the atmosphere becomes tainted with the morbid poison, and the disease spreads. Similar re-

It appears, that the contagion of the fever at present prevailing is subject to a similar law. James Middleton was sent to my fever ward, No. 6, in the Royal Infirmary, by the admitting clerk. When I first saw the patient, on the following day, I found that he laboured under empyema and disease of the heart, but neither had, nor had had any symptoms of the fever. I immediately ordered his removal to a general ward, but unfortunately my orders could not be, or at least were not executed, till the evening of the following day, when he was taken to No. 4, after having been in the fever ward for about fifty hours. During the first day of his residence in the general ward, he continued without any symptoms of fever; but on the forenoon of the following, he had the usual initiatory febrile paroxysm, in so well-marked a form, as to convince me from the first of its nature. On the 5th day from his seizure, he died, intensely yellow, having had much inveterate vomiting, and black vomit for some hours before his death. In the next bed to this man, lay Daniel Lamb, an epileptic patient, who was in the habit of sitting on the fever man's bed during a great part of the day. He was the only patient in the ward who had any intercourse with him, and he was the only one who was seized with the fever. He took ill on the day that his neighbour died; and within five days, he also died, with exactly the same symptoms. These two cases were the most rapidly fatal, and the most malignant in their symptoms, of any that I have seen; and yet, of the other sick and convalescent patients in the ward, (always above twenty in number,) none have been seized with fever since these deaths took place.

From the number of laundry-women that have been attacked, it appears, that the clothes of our fever patients are especial repositories and communicators of the morbid poison. An interesting fact, which may be introduced here, as it is probably to be explained by what has just been stated, was communicated to me by Mr Nicholson, from the Island of Skye, one of my pupils. He informed me, that two reapers, who had had the fever in

sults have followed the same experiment in this Infirmary; and I am quite satified, that were the fever patients *cautiously diffused through the general wards*, the lives and health of many physicians, clerks, and nurses might be spared.

Edinburgh, arrived in his neighbourhood after their return home at the close of the harvest, when not a single case of the fever had been seen in the district. The mother of these persons, with whom they lived from the time of their arrival, was, in a few days, seized with the disease, and died. Other severe, and, in several instances, fatal cases occurred among the neighbours, who had waited upon her; and the disease is now spreading to such an extent over the whole territory as greatly to alarm the inhabitants. The people consider it a new pestilence among them, and are so dismayed at its appearance, and so afraid of its contagion, that they are ceasing to attend at church on Sunday. It is not, of course, to be supposed, that all of the Skye cases have originated in the arrival of the two individuals referred to; because shortly after they returned, many others came back from their annual visit to the south, among whom were not a few who had been patients in the fever hospitals of Edinburgh and Glasgow.

3. *The structural lesions caused by the fever.*

The following summaries of all my dissections will enable the reader to see at one view, what are the structural lesions caused by the fever:—

DISSECTIONS OF THE FATAL CASES IN THE NEW FEVER HOSPITAL.

Name, Age, and Duration of the Disease.	Appearances on Dissection.
James Law, aged 74. Died on the 10th day. *Vide page* 25.	Bile-ducts pervious; gall-bladder contained inspissated bile; liver natural; gastro-intestinal mucous membrane here and there dark-coloured, with submucous exudation of blood; black matter, similar to what was vomited, found in stomach, &c.; the spleen weighed six ounces, and was under the average bulk; kidneys not congested; membranes of the brain not congested; large livid patches on the external surface of the body, but no yellowness of the surface or internal parts.
George Johnstone, aged 20. Died on the 7th day. *Vide page* 29.	Bile-ducts pervious; gall-bladder contained inspissated bile; gastro-intestinal mucous membrane dark coloured, with black patches, and submucous exudation of blood; heart very soft; kidneys yellow in all their textures; liver natural; yellow serum in ventricles of brain; brain natural; yellowness of all the white tissues.

Name, Age, and Duration of the Disease.	Appearances on Dissection.
Archibald Campbell, aged 40. The day of the disease on which he died is not known. *Vide page* 33.	Bile-ducts pervious; gall-bladder contained tenacious inspissated bile; gastro-intestinal mucous membrane vascular, with submucous exudation of blood; stomach over one-third of its surface was very black, from blood effused on the surface of, and under the mucous membrane, and the same appearance was found in other parts of the intestines; spleen weighed eight ounces, and was easily broken down; the white textures generally were yellow; heart healthy; under endo-cardium, especially in the left ventricle, there was considerable effusion of blood.
Jane Merrilees, aged 39. Died on the 14th day. *Vide page* 37.	Bile-ducts pervious; gall-bladder contained bile; spleen greatly enlarged, very soft, and weighed one pound seven ounces; heart natural; every where much congestion.
Mrs Morris, aged 45. Died on the 24th day. *Vide page* 46.	Old disease of the lungs; ulceration of the bowels; black patches of altered blood in the rectum.

DISSECTIONS OF FATAL CASES IN DR CORMACK'S WARDS OF THE ROYAL INFIRMARY.

James Middleton, aged 50. Died on the 5th day. *Vide Appendix.*	Empyema, and other disease of the chest of old standing; intense congestion of all the internal organs; extravasation of blood under, and black adhesive jelly upon the mucous membrane of the stomach, and duodenum; spleen enormously distended, and weighed 2 pounds—it broke down under the fingers, like loosely coagulated blood; yellowness of the external surface, and of all the internal white textures; bile-ducts pervious, and a moderate quantity of bile in the gall-bladder; liver enlarged, apparently from old disease.
Daniel Lamb, aged 37. Died on the 5th day. *Vide Appendix.*	Liver firm, dark-coloured, and turgid with blood; weighed 4 pounds 8 ounces; spleen easily broken down; weighed 1 pound 11½ ounces; bile-ducts pervious; gall-bladder moderately full of very black thick bile; in the stomach, a considerable quantity of the black matter usually found in such cases; in the sigmoid flexure of the colon, submucous exudation of blood; cranial bones unusually thick; a large quantity of yellow fluid in the ventricles of the brain; numerous spiculæ in the cavity of the cranium; heart weighed 15 ounces; yellowness of the surface, and the white textures of the body.

Name, Age, and Duration of the Disease.	Appearances on Dissection.
Archibald Davidson, aged 20. Died on the 9th day. *Vide Appendix.*	Liver firm; of a dirty pale yellow colour; spleen was firm and natural—it weighed five ounces; gall-ducts pervious, and black bile in the gall-bladder; black tenacious jelly adhering to mucous membrane of the stomach, and other parts of intestinal canal; large clots of blood in the submucous cellular tissue of the stomach; the clotted blood encircled the caput cœcum in thick bands under the mucous membrane; the body was yellow externally, as was likewise every white tissue within the body; penis and scrotum had a dark gangrenous appearance, and on the latter, there was a small excoriated surface.

The *post-mortem* appearances must of course vary somewhat with the duration and malignancy of the disease; and a greater diversity of lesions would undoubtedly have been presented to the reader, had more dissections been obtained. Enough, however, has been seen, and is here recorded, to indicate at least the nature of the lesions to be expected in similar cases:—viz. 1. Abundance or even excess of bile, and a pervious state of the biliary ducts; and, 2. More or less congestion of organs, with frequently, extravasation of blood in various situations.

These appearances are either identical with, or analogous to, what the majority of observers have noticed and described, as being those which are found in persons dying of yellow fever. It may be interesting to refer to a few of them.

SOME OF THE PRINCIPAL ANATOMICAL LESIONS FOUND IN THE "YELLOW FEVER."

Appearances of the surface of the Body.

According to many authors, the yellow colour of the surface of the body becomes more decided after death. This sometimes changes for a black or dingy hue, which is particularly well marked in the penis and scrotum. There are often slight excoriations on the scrotum, and M. Bally and others have seen the penis, what they term *gangrenous* at its extremity. Dark lines, and black patches are frequently seen in the axilla, and other parts of the body.

b. *Cellular tissue.*

Desmoulins found that, upon cutting into the cellular tissue, blood exuded, and gas escaped with a hissing noise.[1]

c. *Muscular tissue.*

The muscular tissue is of a darker colour, and softer texture than natural. Gillkrest mentioned some dissections made during the last Gibraltar epidemic, in which " blood was infiltrated into the minuter fibres of muscles," which were black and very soft. He states, " that in one man this infiltration took place into the whole of the muscles of the right thigh, the abductors excepted; in another, into the gastrocnemii of the left leg, and flexors of the right arm. In a third case, precisely half of the diaphragm (right side) was found in this state, and the infiltration bound down by the foldings of the peritoneum, extended in a most singular manner in one continuous sheet from the diaphragm, posteriorly, down the right side to the bottom of the pelvis, keeping with great precision a line corresponding to the axis of the vertebral column, and covering every organ or part of intestine, &c., which lay on that side. It is worthy of notice, that, in this last mentioned case, there was no black vomiting. In none of the cases, were ruptured vessels detected.[2]

d. *Thorax.*

There is often a yellow serous effusion into the pericardium, occasionally mixed with black blood, (Bally, &c.) The heart is generally distended with fluid blood. Ecchymoses of the pleura have been described by Dalmas. During the epidemic of Leghorn, Lacoste,[3] Palloni,[4] and others state, that they not only found bloody effusions, but even gangrene of the diaphragm, pleura, and abdominal muscles; but most probably, they mistook for gangrene, the infiltration of blood observed by Gillkrest.

e. *Abdominal Viscera.*

Stomach.—The blood-vessels of the external surface of the

[1] Desmoulins.—Considérations sur l'état anatomique de la peau, et du tissue cellulaire dans la fièvre jaune.—(*Journal Complimentaire,* t. xii. p. 17.)

[2] Gillkrest.—Cyclop. of Practical Med., vol. ii. p. 277. London, 1833.

[3] Lacoste. Dissertation sur la fièvre regnante à Livoune, &c.

[4] Palloni. Asservazioni mediche. Leghorn, 1824.

stomach are generally enlarged and tortuous,—the inner surface being stained with red and purple, or even black patches; which appearances have led some to suppose, that during the progress of the fever, this organ had been the seat of inflammation and mortification. Hence, some authors have considered gastritis or gastro-enteritis to be the pathological condition of the disease—a fallacy from which the most dangerous practical consequences in this as well as in other forms of fever have resulted, however ingeniously such theories have been defended by Broussais and his disciples.

The dark-brown or black patches visible on the internal surface of the stomach, are entirely the effect produced by contact with the secretion called black vomit, as when this is thoroughly washed away, the mucous coat becomes pale, or merely a slight stain is left. Sometimes, instead of patches, the whole mucous membrane presents one uniform brown tinge; in other cases, it is quite pale. It is generally loose, and easily abraded. When torn off, it often appears like a congeries of engorged capillaries; numerous red spots are seen immediately beneath it, particularly at the cardiac extremity, presenting the appearance termed by the French *rougeur pointillac.* Duflot[1] and others have detected a fluid, identical with the black vomit, in the extremities of the blood-vessels, more or less of which is usually found in the cavity of the stomach. Occasionally, a large quantity of pure blood has been discovered in the stomach; this happened in one-eighth of the cases examined by Bally, François, and Pariset; and Chevé states in his thesis, that he observed it three times on the Senegal.[2] Sometimes, the stomach is distended with gas.

Intestines.—The appearances in the intestines often resemble those in the stomach; but they are generally in a less marked degree. In some protracted cases, there are minute ulcerations. Jackson states, that the diameter of the intestines is sometimes contracted, and that intro-susception is not uncommon.[3] The black matter is in some cases found only in the

1 Duflot. Etudés sur la Fièvre Jaune : thèse, à Paris.

2 Cheve. Rélation des Epidémics de Fièvre Jaune, qui ont régné à Gorée et à St Louis (Sénégal) pendant l'hivernage de 1830 : thèse, à Paris, 1836.

3 Vide p. 93.

small intestines. Gillkrest has pointed out, that the glands of Peyer are never diseased.

Peritoneum.—Larrey states, that in Egypt he always found what he considered inflammation of the peritoneum.[1] Numerous French and Spanish authors describe quantities of black blood as being found in the folds of the mesentery.

The spleen is, according to most authors, frequently gorged with blood, and softened.

The pancreas is seldom altered in colour, consistence, or volume. Dalmas, and Lazo de Perez, mention some instances, however, in which it was enlarged.[2]

The Liver.—The structure of the liver does not seem, as many have supposed, to undergo any uniform alteration, but is sometimes, on the contrary, quite healthy in appearance. The morbid anatomy of this organ, therefore, does not throw much light upon the pathology of yellow fever. But the appearances found on dissection, when viewed in connection with the alterations of the other viscera, are of some importance. Jackson says, that the liver and spleen are often gorged with black blood, "so as to be perfectly rotten," and that generally, even in mild cases, it is turgid and increased in size. He describes the gall-bladder as being sometimes full and sometimes empty, and as containing bile, either thin, or thick and black, like tar or molasses. Gillkrest states, that during the greater part of the Gibraltar epidemic of 1838, the colour of the liver was pale olive, or a mixture of green and yellow in ordinary cases, but little altered in the more malignant. In women and children, the tinge was paler. He found the gall-bladder diminished in size, and containing a minute quantity of orange-coloured, or green bile, and occasionally of pus. The cystic duct is reported to have been impervious in a few cases.[3]

[1] Larrey, (Campagnes, tom. ii.) Mémoire sur la fièvre jaune, Paris, 1821.

[2] Lazo et Perez. Colleccion de inspecciones anatomicas relativas a la fiebre amarilla. Cadiz.

[3] I do not presume to say, that so accurate an observer as Dr Gillkrest made a mistake regarding this state of the cystic duct: but I have known of its having been declared impervious, when in a perfectly normal condition, simply from the examiner forgetting, that in pushing the most delicate probe up the duct from the gall-bladder, it is likely to meet with an impediment from a fold of mucous membrane. The blowing up of air through a small blow-pipe is the proper method of exploration.

Louis attaches great importance to a particular appearance of the liver, which he found to be the most universal of all the *post-mortem* appearances which he observed at Gibraltar. As a similar appearance was met with in some of my cases; and as I am informed, that it has been often met with at Dundee, during the last twelve months, his description is subjoined :—" The most remarkable lesion of the liver, was the alteration of its colour, which was more or less exactly the same in all the cases, and through the whole extent of the organ, with three exceptions, of which I shall soon have occasion to speak. This alteration consisted in a discoloration, the liver being sometimes of the colour of fresh butter, sometimes of a straw colour, sometimes of the colour of coffee and milk, sometimes a yellowish gum colour, or a mustard colour, or finally, sometimes an orange or pistachio colour. This discoloration was not the same through the whole extent of the liver; it was more marked in the left, than in the right lobe; it was also more uniform. In cases where the colour was uniform in the left lobe, there was in the right lobe a mixture of gum-yellow, orange, or red points, larger or smaller; or else, we found in the right lobe a rose tint, which did not exist in the left lobe. The cases in which the colour of the liver was formed by the mingling of different coloured points, were rare, and this disposition was somewhat remarkable in one of them, where the liver presented a mixture of yellow and green points. The last colour could not be considered the result of commencing putrefaction, for the subject was opened six hours after death. In the three cases referred to above, in which the discoloration of the liver was not universal, the right lobe preserved its natural colour throughout, or in its obtuse edge only. With the discoloration of the liver we found a more or less marked paleness, and a diminished quantity of blood, so that wherever this appearance of the liver was well marked, the sections of it were dry, and of an arid appearance in the left lobe."[1]

The *kidneys* in general present no very remarkable alterations, though they are, like the liver and spleen, frequently gorged with blood, especially when there has been suppression of urine. Sa-

[1] Louis. Anatomical, Pathological, and Therapeutic Researches on the Yellow Fever of Gibraltar of 1828; translated from the manuscript, by G. C. Shattuck, junior, M.D. Boston, 1839. *Vide* page 117.

vuresi states, that in the fever of Martinique,—an epidemic characterized by much delirium and stupor,—he constantly found inflammation, as well as engorgement of the kidneys. He has also seen the *ureters* contracted, and their inner surface adherent, so as to obliterate the canal. Rochoux maintains, that he has discovered traces of phlogosis of the kidneys in one-third of the bodies he examined. The *urinary bladder* is often contracted and thickened.

f. The Brain.

The vessels of the *dura* and *pia* mater, as well as the choroid plexus, are usually gorged with dark blood. Serous effusion is rare in some epidemics, and common in others. Rochoux, in describing the yellow fever of Guadaloupe, states, that inflammation of the membranes of the brain was seldom seen, and when it did occur was less severe than in Europe; but this statement is not confirmed by others. Amid the discordance of opinion, we can hardly hope to arrive at the truth; this, however, we learn, that this lesion varies in different epidemics. When there is coma before death, it is natural to expect hyperæmia of the brain. Some have described softening, and others, hardening of the brain. The spinal canal has been found to contain yellow serum, especially in the lumbar and sacral regions. Dr Thomas of New York believes the seat of the disease to be in the spinal marrow, and relates ten cases in which he supposed that he had detected inflammation of the investing membranes. He mentions also, having seen in all his cases, inflammation of the stomach. The nerves were attentively examined by François, Bally, and Pariset, but no morbid appearances were discovered. Cartwright, in his essay on the yellow fever of Natchez, states that he found the semilunar ganglion and cœliac plexus much altered; their neurilema and their tissue were of a deep red colour, and mottled with black spots.

All these appearances are evidently the result of congestion; and many of them, not observed in my dissections, would, in all probability, have been observed, had they been looked for.

CHAPTER IV.

SEQUELÆ OF THE FEVER.

My opportunities of studying the sequelæ of the fever have necessarily not been very extensive, as leisure could not be afforded, to watch any considerable number of patients, after their dismissal from the hospital.

The post-febrile affections which I have noticed in the hospital are,

1. *A peculiar form of ophthalmitis, usually preceded by amaurotic symptoms.*
2. *Glandular swellings.*
3. *Boils and cutaneous eruptions.*
4. *Effusion into the knee-joint.*
5. *Swelled legs and ankles.*
6. *Pain in the feet, with, and without swelling.*
7. *Paralysis of the deltoid, and certain other muscles.*
8. *Sloughing of parts.*

1. *A peculiar form of ophthalmitis, usually preceded by amaurotic symptoms.*

This disease is particularly interesting, from the resemblance which it bears in some of its characters to rheumatic ophthalmia, and from its occurring as a sequel to a fever in which muscular and arthritic pains are very prominent symptoms. It has been described by Dr Mackenzie, in the Medical Gazette for the 24th of November, as a sequel of the fever now prevailing in Glasgow; and also by Dr Jacob and others, as having occurred in persons after recovering from the Dublin epidemic of 1826.

The first case which occurred to me, I sent to Dr Watson, at the Eye Infirmary, from whom I first learnt, that the affection was prevalent in Glasgow, and had attracted the attention of Dr Mackenzie, the eminent oculist of that city.

The first person in whom I noticed this disease was a man aged 50, who was admitted to the New Fever Hospital, on the 29th August, when convalescent from a second relapse, or third attack of the fever. He was very feeble, but made no particular complaint, except of slight general articular pains, and intolerance of light; there was much lachrymation. Nourishing food, and a quinine mixture were ordered. In a few days, as he became much stronger, he was removed to the convalescent ward. I heard nothing of the eye for some days, when, upon my proposing his dismissal, he complained of dimness of vision, with pain in the organ and above the orbit. Upon examining the right eye, the lens was found to be hazy, and the sclerotic to have a muddy look as contrasted with that of the other eye. The cornea was roughened with extremely minute ulcers, the individual outlines of which were hardly visible, except when looked at in a strong light and through a magnifying glass. A blister was applied behind the ear, and a discharge kept up from the surface for some days: a few drops of a solution of two grains of nitrate of silver in an ounce of distilled water were daily let fall upon the open eye. Under this treatment, the pain entirely left him, but the ulcerations of the cornea showed little disposition to mend, and the blindness increased. It was in these circumstances, that the patient was sent to the Eye Infirmary.

The only other persons whom I have seen with post-febrile ophthalmitis were two females. In them the disease was of a much more acute character, the conjunctivæ and sclerotics of both eyes being intensely injected: there was severe pain, and almost total loss of vision. For two or three days before the inflammatory symptoms disappeared, there was amaurosis. Both were very weak. The treatment consisted in fomentations, leeches, the use of a shade, and a liberal allowance of wine. When they left the hospital, no visible sign of disease existed in the eyes, but there was still impaired though returning vision.

The following is the most important part of the valuable memoir of Dr Mackenzie:—

"Typhus fever is sometimes followed by muscæ volitantes, or even by amaurosis, and in some rare instances by phlebitic ophthalmitis. Certainly, no febrile disease with which we have been

hitherto acquainted in this country is followed by such an inflammatory affection of the eye, as that which I am about to describe. I have known the disease which is called hay fever, followed by intermittent ophthalmia, of iritic character. Dr Lawrie informs me, that remittent fever in India is sometimes followed by corneitis, and sloughing of the corneæ.

"I shall now select, from the journals of the Glasgow Eye Infirmary, a few cases illustrative of the affection of the eye which has appeared as a sequela of the remittent fever now prevailing. From the 8th August to the 31st October, when I finished my quarterly period of attendance, 36 cases of this description were taken on the list. The general subjects of the affection in question have been from 17 to 20 years of age; but it has spared neither young children nor old people. The youngest out of the 36 was 18 months old; the oldest was 56 years. The general character of the disease has been partly amaurotic and partly inflammatory. In by far the greater number of cases, the eyes attacked had been previously healthy, but in some instances, they had suffered from other diseases, and in one case, they were already in a great measure disorganized.

"I.—*Amaurosis and ophthalmitis after remittent fever—treated by leeches, calomel and opium, belladonna, blisters, and quina—complete recovery.*

"No. 13185.—*Aug.* 8, 1843. Margaret Spence, aged 12, was seized with remittent fever, which she calls influenza, nine weeks ago. Right eye became red three weeks ago. Conjunctiva still somewhat red; pupil dilated, and does not contract readily on exposure to light; vision of right eye so dim, that she does not see the eyes of a person sitting before her. Circumorbital pain. Pulse 180.—*Hirud. vj ad tem. dext.—R. subm. hydr. gr.iv.; pulv. opii gr.j. M. ft. pulv. hor. som. sumend.—Cras mane sumat sulph. magn.* ℥ss.

"9*th.* Less pain; vision rather better.—*Extr. bellad. ad palp. dextr.—R. subm. hydr. gr.xij, opii gr.ij, sacc. alb.* ℈j.—*M. opt. et divide in pulv. xij. Cap. j* 8*â qq. horâ.*

"10*th.* More pain.—*Hirud. vj ad palpebr. dext.*

"12*th.* Eye easier, and less red. Vision rather better. Right

cornea more than naturally flexible.—*Rep. sulph. mag.*—*Vesicat. pone aur. dextr.*

"13*th.* Pain subsides. Vision improves.

"15*th.* Sees best when she looks over her nose.

"16*th.* *Rep. belladon.*—*Vesicat. ad tem. dextr.*

"17*th.* Pupil widely dilated, and vision consequently more obscure.

"18*th.* Pupil not so widely dilated. Vision improved. No pain.

"21*st.* *Cap. pulv. subm. hyd. et opii j.*—*Rep. vesicat. pone aur. dextr.*

"27*th.* Vision much improved; pupil of natural size. Has caught cold, and complains of pain in the chest.—*Pediluv. tepid. vespere.*—*Omit. medicamenta.*

"28*th.* *Hirud. vj ad pectoris partem dolentem.*—*Cap. ol. ricini* ℥ss.

"29*th.* Relieved by the leeches.

"30*th.* Is confined with measles.

"*Sept.* 6*th.* Dimness of sight of the right eye still continues.—*Vesicat. parvum ad temp. dextr.*

"13*th.* Bowels loose.—*Cap. quam primum tinct. opii gtt. x. R. opii gr.j. Cretæ ppt.* ℥ij. *M. et div. in pulv. xij. Cap. j post sedes singulas liquidas.*

"15*th.* Bowels still loose.

"24*th.* *Cap. sulph. quin. gr.j. ter in dies.*

"*Oct.* 15*th.* Says her eye is perfectly well.—*Omit. remedia.*

"II.—*Retinitis and amaurosis after remittent fever—complete cure by leeches, calomel and opium, blisters, and quina.*

"No. 13186.—*Aug.* 8, 1843. Margaret Paterson, aged 11, had remittent fever in the end of June. Eight days ago, the right eye appeared red. The conjunctiva and sclerotica are moderately injected; the iris is of a green hue; the pupil somewhat dilated, and very sluggish; the retina retains merely a perception of light and shade. No pain of head; pulse 120; tongue clean.—*Hirud. vj ad temp. dextr.*—*R. subm. hydr. gr.iv, pulv. opii gr.j. M. ft. pulv. hor. som. sumend.*—*Cras mane sulph. magn.* ℥ss.

"9*th.* Tells a pen and other objects with right eye.—*Rep. pulv. et sulph. magn.*—*Vesicat. pone aur. dextr.*

"10*th.* Eye painful; much lacrymation; vision again worse.—*Hirud. vj ad palp. dextr.*

"14*th.* Symptoms subside. Sees best when she looks dextrad. *R. subm. hydr. gr.xij., pulv. opii gr.j, sacc. alb.* ℈*j. M. div. in pulv. xij. Cap. j o. n.*

"15*th. Vesicat pone aurem dextr.*

"19*th.* Has by mistake been taking a powder thrice a-day.—*Cap. pulv. j o. n. tantum.*

"22*d.* Right pupil not so much expanded as left. Vision improves slowly; is still most defective when she looks sinistrad.

"25*th.* Vision continues to improve.—*Omit. pulv. subm. hydr. et opii.—Cap. sulph. quin. gr.j ter in dies.*

"27*th.* Still improves.

"*Sept.* 1*st.* Vision much improved.

"3*d.* Bowels confined.—*Cap. pulv. jalap. comp. gr.xv.*

"6*th. Cont. quina.*

"12*th.* Continues to improve.

"20*th.* Says her eye is quite well.

"III.—*Iritis after fever—treated with quina, leeches, and vesication.*

"No. 13223.—*Aug.* 26, 1843. Catherine M'Donald, aged 55, has been labouring under the epidemic fever now prevalent. Right eye affected with iritis. Iris discoloured; pupil hazy; vision dim; nocturnal pain in eyeball, preventing sleep. Pulse 96, small.—*Belladon. ad palp. dextr.—Cap. sulph. quin. gr.ij* 8*vâ qq. horâ.*

"29*th.* Pain not relieved.—*Hirud. vj ad palp. dextr.—Cap. ol. ricini* ℥*j.—Hodie omit. quina.*

"*Sept.* 1*st.* Eye easier; vision clearer.

"8*th. Vesicat. pone aur. dextr.*

"14*th.* Much improved.

" IV.—*Ophthalmitis after fever—treated by venesection, leeches, calomel and opium, belladonna, vesication, and quina—muscæ volitantes left.*

" No. 13254.—*Sept.* 7, 1843. James Nairn, aged 18, had epidemic fever in July last. After twelve days, had a crisis, but relapsed after other four days, with shiverings, and pain in the bowels. Eleven days ago, symptoms of iritis affected right eye. Sclerotica injected; iris, naturally hazel, of a darker colour than that of opposite eye; pupil contracted and irregular; sight so dim that he cannot read the large letters on the Infirmary card. Supra-orbital pain, increased during the night, and preventing sleep. Has applied four leeches, without relief.—*Venesectio. Belladon. ad palp. dextr. Cap. pilulam cum subm. hydr. gr.ij, opii, gr.ss. 8vâ qq. horâ.*

8th. Pain relieved; pupil somewhat dilated; vision rather clearer.

" *9th. Hirud. vj ad temp. dextr.*

" *10th. Gutta sol. nitr. argent.* (*gr.x ad aq. ʒj*) *ad ocul. dextr. Vesicat. pone aur. dextr.*

" *12th.* Eye easier; pupil more dilated.

" *14th.* Much improved.

" *17th.* Mouth begins to be affected; eye much better.—*Cap. pilulam in dies tantum.*

" *20th.* A musca volitans before right eye. In other respects better.

" *25th. Omit. pil.—Cap. sulph. quin. gr.j ter in dies.*

" *Oct. 6th.* Eye free from inflammation; still complains of muscæ volitantes before right eye.

" *24th.* Says that the vision of right eye is as clear as that of left, but he is still troubled with muscæ volitantes.—*Omit. quina.*

" V.—*Epidemic fever—abortion—iritis—cured by belladonna, quina, and purgatives.*

" No. 13260.—*September* 9, 1843. Mary Quin, aged 20, was seized with epidemic fever about a month ago. This was followed by an abortion in the fourth month. Eyes have been affected with slight rheumatic iritis for twelve days. Pulse 96. Bowels

regular.—*Belladon. ad palpebras.—Cap. sulph. quin. gr.j octavâ qq. horâ.*

" 11*th.* Right pupil a little dilated, and vision of that eye somewhat clearer.—*Cap. pulv. jalap. comp.* ʒss.

" 12*th.* Right pupil more dilated.

" 14*th.* Inflammation abates.

" 18*th. Rep. pulv. purgans.*

" VI.—*Epidemic fever, followed by capsulitis of the crystalline and cornea.*

" No. 13263.—*Sept.* 10, 1843. John Collins, aged 31, a travelling dealer in stoneware, had the epidemic fever about six weeks ago. Eight days ago, when travelling by railway, supposed some particles of coke to have got into his right eye. Conjunctiva and sclerotica of that eye very slightly injected; iris of a lighter colour than that of opposite eye; both irides greenish; makes no complaint of left eye, the vision of which is good; right pupil natural in size; its motions limited and slow; vision of right eye so dim that with difficulty he tells one finger from another with it, when held close before him; pupil appears slightly muddy, and on concentrating the light upon it with a convex lens, a reddish wreath appears on the anterior crystalline capsule, just within the verge of the pupil; says that for two nights, the pain was pretty severe in right eyeball. Pulse 84, small; tongue white. —*Belladon. ad palp. dextr.—Pulv. purg.* ℈j.

" 11*th.* Right pupil widely dilated; the red wreath is now situated half way between the centre and the circumference of the pupil; a number of minute spots visible on the internal surface of the cornea, especially towards its lower edge; vision considerably clearer.—*Cap. pil. hydrarg. j m. et v.*

" VII.—*Epidemic fever followed by ophthalmia of catarrho-rheumatic character, relieved by venesection, belladonna, purgatives, and calomel and opium.*

" No. 13282.—*September* 19, 1843. Ann Morrison, aged 41, had epidemic fever in July, since when has been constantly troubled with pain in left side of head. Left eye affected with oph-

thalmia of catarrho-rheumatic character. Pulse 72; tongue foul; bowels costive; no sleep, from the hemicrania. Applied four leeches with some relief.—*Belladon. ad palp. sinistr. Venesectio. Pulv. purg.* ℈*j.*

" 20*th.* Blood buffy; pain much relieved; pupil irregularly expanded.—*Cap. pil. cum subm. hydr. gr.ij, et opii gr.ss., m. et v.*

" 21*st.* Eye free from redness.

" 23*d. Cap. sulph. magnes.* ℥*j.*—*Hodie omit. pil.*

" VIII.—*Epidemic fever — premature labour — amaurosis and ophthalmia—cured by bleeding, mercury, blisters, and belladonna.*

" No. 13290.—*Sept.* 20, 1843. Catherine Auld, aged 28, was seized with the prevailing fever two months ago. Relapsed, and had a premature confinement at the eighth month. Since her convalescence, sight of both eyes has become dim, and the right eye is inflamed.—*Hirud. vj ad temp. dextr.*

" 21*st.* Hemicrania on right side.—*Belladon. ad palpebras. Venesectio.—Cap. pil. cum subm. hydr. gr.ij, et opii gr.ss., m. et v.*

" 22*d.* Pain relieved. Right pupil irregularly dilated, being tagged to capsule at nasal edge.

" 23*d.* Pain increased.—*Rep. venesectio.*

" 24*th.* Pain relieved.—*Omit. pil.—Vesicat. pone aur. dextr.*

" 26*th. Cap. ol. ricin.* ℥*j.*

" 27*th. Hirud. vj ad temp. dextr.*

" 29*th.* Eye improves. Still complains of supra-ocular pain. —*Vesicat. ad temp. dextr.*

" *October* 2. *Cap. pil. j in dies tantum.*

" 15*th.* No pain nor inflammation. A lace-work of muscæ volitantes before each eye, which, however, does not prevent her from reading small type.—*Cap. sulph. quina gr.j ter in dies. Omit. pil.*

" IX.—*Epidemic fever—iritis—cured by combination of quina and calomel.*

" No. 13330.—*Oct.* 5, 1843. Agnes Jeffray, aged 17, was seized with the prevailing fever six weeks ago. Being convalescent after a relapse, began to sew, which has brought on inflammation of right eye. Iris of a green colour; pupil contracted;

vision dim.—*Belladon. ad palp. dextr.—R. sulph. quininæ, subm. hydr., āā gr.xij, sacc. alb. ℈j. M. et div. in pulv. xij. Cap. j octavâ qq. horâ.*

" 6*th.* Pupil widely dilated; eye easier.

" 7*th.* Eye free from inflammation.

" 10*th.* Continues to improve.

" X.—*Ophthalmia interna after fever—yields slowly and imperfectly to quina.*

" No. 13333.—*October* 8, 1843. William Armour, aged 17, is a fortnight convalescent from epidemic fever; left iris presents a darker colour than natural; pupil rather hazy; sclerotica slightly injected; vision dim.—*Belladon. ad palp. sinistr.—Cap. sulph. quin. gr.j ter in dies.*

" 10*th.* *Cont. remedia.*

" 12*th.* Has had more pain.—*Hirud. vj ad palp. sinistr.*

" 15*th.* Still occasional attacks of pain; vision improves.—*Cap. sulph. quin. gr.ij 8vâ qq. horâ.*

" 22*d.* Pain entirely gone; vision of left eye still very dim.—*Cont. bellad. et sulph. quin.*

" 27*th.* Vision does not improve.—*Omit. sulph. quin.—Cap. pil. subm. hydr. gr.ij, et opii gr.ss. octavâ qq. horâ.*

" 29*th.* Vision clearer, but still so imperfect that he cannot with left eye make out characters an inch long; iris of a greenish hue, and bolstered forwards towards cornea; eyeball preternaturally flexible.—*Abrad. latus. cap. sinistr. et appl. vesicat. pone aurem.—Cont. belladon. et pilulæ.*

" XI.—*Ophthalmia interna after fever—passes from right to left eye—yields slowly to depletion, mercury, quina, belladonna, and vesication.*

" No. 13339.—*October* 11*th*, 1843. Grace Arnott, aged 15, is two months convalescent from epidemic fever; about ten days ago, right eye became inflamed; sclerotica intensely injected; iris of a dull green colour; pupil of natural size, moveable, but very hazy; vision so dim, that with right eye merely perceives light and shade; pulsatory pain in eyeball; no circumorbital

pain; pulse 84; occasional rigors; has been working in a cotton mill, and in a high temperature.—*Hirud. vj circum oculum dextr.—Cap. pilulam cum subm. hydr. gr.ij, et opii gr.ss., octavâ qq. horâ.*

" 12*th*. *Belladon. ad palp. dextr.—Abrad. latus dextr. capit. et applic. vesicat.*

" 13*th*. *Venesectio.*

" 14*th*. Blood not buffy; pain not relieved; pupil irregularly dilated.—*Cap. sulph. quin. gr. iij, octavâ qq. horâ.—Cont. pil.*

" 15*th*. Bowels bound.—*Cap. quam primum sulph. magn. ℥j.—Cont. quin. et pil.*

" 16*th*. Pain less; vision clearing; four or five stools, from the salts; pupil somewhat dilated; irregular; rather clearer.

" 17*th*. More pain and lacrymation during the night; vision continues rather clearer.—*Omit. pil.*

" 18*th*. *Rep. hirud.*

" 19*th*. *Vesicat. ad temp. dextr.*

" 20*th*. Mouth sore.

" 21*st*, Through the night, left eye became affected with pain and redness; vision of it somewhat dim; right eye improves; had rigors during the night, when the pain shifted from the right to the left temple.

" 22*d*. Left pupil widely dilated; right eye improves.—*Belladon. ad palp. dextr. tantum.*

" 23*d*. Appearance of right eye greatly better.

" 24*th*. Left eye more affected, being red and painful.—*Hirud. vj circum oculum sinistr.*

" 25*th*. Pain of left eye relieved by the leeching; right eye free from redness; iris more of its natural colour; pupil irregularly dilated, presenting two tags to capsule at its upper edge.—*Cont. sulph. quin. et belladon.*

" 26*th*. Both pupils widely dilated; right still irregular; vision of right eye still very dim; no pain; no rigors.

" 29*th*. Eyes free from redness and pain; vision of right eye so dim that she cannot make out letters an inch long; with left eye reads the smallest type on infirmary card; right pupil still a little irregular; left cornea preternaturally flexible; mouth well.—*R. subm. hydr. gr.xij, sulph. quin. gr.xxiv.—M. et div. in pulv. xii. Cap. j octavâ qq. horâ.—Cont. belladon.—Omit. alia.*

" XII.—*Epidemic fever; three relapses, followed by amaurosis and ophthalmitis; symptoms yield to quina, leeches, and mercury.*

" No. 13346.—16*th October* 1843. John Harvey, weaver, aged 44, had epidemic fever twelve weeks ago; had three relapses; found vision of left eye to become dim about a fortnight ago; it is now so deficient that he merely perceives light and shade with it; four days ago the eye began to get red; sclerotica much injected; a narrow whitish ring between sclerotica and cornea; cornea rather hazy; iris greenish; pupil contracted, irregular, and very hazy; supra-ocular pain increased during the night, and at that time preceded by rigors; much lacrymation; muscæ volitantes; pulse 72; bowels regular; thinks the affection of his eye arose from his going into his cold shop to work. —*Belladon. ad palp. sinistr.—Cap. sulph. quin. gr.iij, octavâ qq. horâ.*

" 17*th.* Eye easier; less lacrymation.

" 18*th.* Vision rather clearer.—*Vesicat. pone aur. sinistr.*

" 19*th.* Symptoms abate.

" 21*st.* Supra-orbital pain still considerable; vision clearer.—*Hirud. vi ad palp. sinistr.*

" 23*d.* Pain somewhat abated since the leeching; pupil still contracted, and vision dim.—*Vesicat. parv. ad part. frontis dolent.*

" 25*th.* Pain relieved; eye remains in much the same state.—*Cap. pil. subm. hydr. gr.ij, et opii gr.ss., octavâ qq. horâ.—Omit. quin. Cont. belladon.*

" 30*th.* Eye improves; with some difficulty makes out letters an inch long; mouth sore.—*Cap. pilulam in dies tantum.*

" XIII.—*Ophthalmitis after fever; being neglected, ends in synechia posterior, and almost total loss of sight; slow improvement under the use of quina and calomel.*

" No. 13355.—18*th October*, 1843. Bridget Carey, aged 50, had epidemic fever four months ago; three months ago, sight began to fail; both pupils are irregular, and the lenses very hazy; vision, especially of the left eye, nearly limited to a perception of

light and shade; gropes like an amaurotic, and has a most melancholy expression; to relieve the burning heat of eyes, poulticed them for two months; this has produced entropium of each lower eyelid; pain in the temples, especially during the night; tongue clean; bowels bound; back of pharynx ulcerated; says the throat has been sore since before taking the fever; has used only purgatives, such as salts and castor oil.—*Belladon. ad palpebras.—Vesicat. ad tempora.—R. subm. hydr., sulph. quin. āā gr. xxiv. M. et div. in pulv. xij. Cap. i octavâ qq. horâ.*

" 19*th.* Pain in head somewhat less; bowels griped; a stripe of court-plaster applied across each lower lid.

" 20*th.* Complains much of pain in left side of head.

" 21*st.* Entropium less troublesome.

" 23*d.* Mouth sore; pain subsiding; vision appears to be stationary.—*Omit. subm. hydr.—Cont. quina.*

" 24*th. Gargarism. alumin.—Cap. h. s. pulv. dover. gr.xij.*

" 25*th.* Bowels loose.—*Cap. ol. ricin. ℥j. Cont. quin. et pulv. dover.*

" 26*th.* A good night; pain of head much less; there appears to be no improvement in the eyes.

" 28*th.* Right pupil irregularly dilated; distinguishes a pen and other objects with right eye, being the first sign of improvement in vision since her admission.—*Cont. bellad. quin. et pulv. dover.*

" 29*th.* Is much less troubled with the entropium; both pupils very irregular, presenting numerous adhesions to capsules; appears to have merely perception of light and shade with left eye; vision of right eye improves; still complains of pain in left side of head.—*Abrad. latus cap. sinistr. et appl. vesicat. ad partem dolentem.—Cont. alia.*

" 30*th.* Pain relieved by the blister.

" XIV. *Remittent fever, followed by ophthalmitis; cured by belladonna, purging, leeches, and mercury.*

" No. 13375.—25*th October*, 1843. Jane M'Naught, aged 13, was seized with remittent fever five weeks ago; for eight days past the left eye has been inflamed; pupils irregular; vision

dim; nocturnal pain; bowels bound.—*Belladon. ad palp. sinistr. —Pulv. purg. gr. xv.*

" 26*th.* Three stools from the powder; no sleep on account of the pain.—*Cap. pulv. dover. gr. viii h. s.*

" 27*th.* A rather better night; sclerotica very vascular.—*Hirud. vi ad palp. sinistr. Cap. pil. cum subm. hydr. gr. ij; et opii., gr. ss. mane et vespere.*

" 28*th.* Eye easier; no pain in the head; a good night; sclerotica less injected; pupil pretty clear; vision more distinct; bowels regular.—*Cont. belladon. et pilul.—Vesicat. pone aur. sinistr.*

" 30*th.* Pupil widely dilated.—*Ablue belladon.*

" *Nov.* 1*st.* Continues to improve.

" XV.—*Severe ophthalmitis after remittent fever; relieved by venesection and mercury.*

" No. 13378.—28*th October* 1843. Hugh Leech, aged 26, was seized with remittent fever about eight weeks ago. First attack lasted about ten days; the remission, three days; and the second attack seven days. During his convalescence was sleeping in a very uncomfortable place, and much exposed to cold. On the morning of the 25th, awoke with great pain in right eye. The sclerotica is intensely red, the iris has assumed a green colour, the cornea is slightly hazy, and the pupil very much so; it is considerably contracted, and the vision of the eye is limited to a perception of light and shade; pulse 108; tongue white. Underwent no treatment for the fever.—*Belladon. ad palp. dextr. Venesectio.—Cap. pulv. subm. hydr. gr. ij, et opii. gr. ss., octavâ q. q. horâ.*

" 29*th.* Blood somewhat buffy; felt relieved by the bleeding; pulse 84; sclerotica not so red; pupil not so hazy; vision clearer. —*Abrad. latus capit. dextr. et appl. vesicat. pone aurem.*

" 30*th.* Blisters have been applied behind both ears.

" *Nov.* 1. Mouth sore. Can read the numbers on the tickets, which are about an inch long.—*Cap. pulv. vesp. tantum. h. s. cap. pulv. dover. gr. viij.*

"XVI.—*Remittent fever—abortion—ophthalmitis—relieved by leeching and mercury.*

"No. 13379.—28*th October*, 1843. Flora Reynolds, aged 22, was seized with epidemic fever six weeks ago. Says the attack lasted two weeks, and that she had no relapse. Five weeks ago, had a miscarriage at the third month, with excessive discharge. Menstruated a week ago, and more profusely than common. Says her feet and legs became dropsical during her convalescence. Was sleeping in an apartment with broken windows, and ten days ago, was attacked with pain in left eye, which now presents the usual symptoms of ophthalmitis post febrem, the sclerotica being injected, the iris discoloured, and vision very dim. No sleep, from hemicrania; pulse 84; tongue clean; bowels regular.—*Hirud. vj ad palp. dextr.—R. subm. hydr. gr.v; pulv. dover. gr.xij.—M. ft. pulv. h. s. sumend. cras mane, sulph. magnes. ℥j.*

"30*th*. Pain almost gone. Vision clearer.—*Belladon. ad palp. sinistr. Cap. pil. subm. hydr. gr.ij, et opii gr.ss., octavâ q. q. horâ.*

"Remarks.—The cases above related may serve to give an idea of the affection of the eyes, which has in so many instances followed the fever now prevailing, and of the treatment which I have employed for it. I have generally called the disease *ophthalmia post febrem*, but perhaps, the appellation of *ophthalmitis post-febrilis* is more correct.

"*Statistics.*—The following are a few statistical facts, which may be worthy of notice:

"Out of the 36 cases which I treated in August, September, and October, 27 occurred in females, and only 9 in males.

"The following were the ages of the 36 patients: below ten, 2; from ten to twenty, 17; from twenty to thirty, 9; from thirty to forty, 2; from forty to fifty, 3; from fifty to sixty, 3.

"In 18 of the cases, the right eye only was affected; in 10, the left only; and in 8, both eyes, either together or consecutively.

"The attack of ophthalmitis occurred at various periods from three to sixteen weeks from the commencement of the fever. In several cases it came on about two weeks after convalescence from the relapse, but generally somewhat later.

"The very same disease of the eye occurred after the Dublin epidemic of 1826, and was described by Mr Hewson,[1] Dr Reid,[2] Dr Jacob,[3] and Mr Wallace.[4] The last-mentioned author has remarked the greater liability of the right eye to be affected than the left. 'Of forty cases,' says he, 'which I have noted, there were only four who had the disease in the left eye, and only two had it in both.' Out of the ten cases in which it happened to me to observe it in the left eye, seven were females. The attack is generally traced to a draught of cold air during the night; it is probably the eye which is exposed which becomes affected, while that belonging to the side on which the patient rests, escapes.

"Dr Jacob has remarked, that the disease occurs much more frequently in young than in old persons. Of thirty cases in which he noted the ages, three only were above 25. He also met with it more frequently in females than males. In the majority of the cases seen by him, the inflammation made its appearance within six weeks, or two months after recovery from the fever; in some instances, however, it appeared before the patients left the hospital, and in others, not for four, five, or even eight months.

"*Symptoms.*—The character of the disease appears to be, in the first instance, that of congestion, followed by inflammation of the internal parts of the eye, and especially of the retina, producing great imperfection of sight. This is succeeded by evident inflammation of the iris and sclerotica; the disease extends to the capsule of the lens, and sometimes to the lining membrane of the cornea; there can be little doubt but that the choroid is also inflamed; while the conjunctiva remains in general but slightly affected.

"The part which the sclerotica takes in the disease is plain enough, from the intense injection of the blood-vessels which lie on its surface, and which, derived from the muscular and anterior ciliary arteries, are seen running in radii towards the cornea. The change of colour in the iris, the contracted state of the pupil, and the tags of adhesion between the edge of the pupil and

[1] Observations on the History and Treatment of the Ophthalmia accompanying the Secondary Forms of Lues Venerea, pp. 34, 109. London, 1814.

[2] Transactions of the Association, &c. vol. v. p. 294. [3] Ibid. p. 468.

[4] Medico-Chirurgical Transactions, vol. xiv. p. 286. London, 1828.

the capsule of the lens, show the part which the iris takes in the disease. The internal membrane of the cornea, and the anterior crystalline capsule, especially the latter, are extremely muddy, showing their participation in the inflammation. The whole walls of the aqueous cell seem, in some cases, as if coated with a thin layer of lymph, of a yellowish-green colour. The great deficiency of sight is not explicable from the mere muddiness of these parts, and is, besides, often the earliest symptom of the disease, showing an affection of the retina. At an early period, the pupil is sometimes dilated, and does not become contracted till the inflammation embraces the iris. If not promptly combated by the appropriate remedies, the cornea and sclerotica become preternaturally flexible under the pressure of the finger, showing that the disease has extended to the vitreous body. In one case, I found the cornea very flexible in the amaurotic stage, before there was any appearance of inflammation.

"At the commencement, it is possible, that only the central artery of the retina, and the vasa longa of the hyaloid, may be affected. The irritation and injection speedily spread, in all likelihood, to the short, as well as to the long ciliaries; to the vessels of the ciliary processes, and of the zonula Zinnii; to the vasa brevia of the hyaloid, the vessels of the anterior crystalline capsule, and those of the lining membrane of the cornea; and to the sclerotic network.

"The lacrymation is very considerable, and seems to be connected, not so much with the state of the conjunctiva, as with the pain in the interior of the eye-ball. The severe pain in and round the eye, aggravated during the night, is exactly similar to what attends rheumatic and syphilitic ophthalmia, and may partly be ascribed to the pressure exercised upon the ciliary nerves within the eye, by the inflamed parts, partly regarded as a direct neuralgic affection, such as we often meet with in the six branches of the fifth nerve which emerge from the orbit, when there is no evident inflammation present. It is, in general, only after the iris and sclerotica have taken part in the disease, that the patient complains of the ocular and circum-orbital pain. So long as the disease is confined to the retina there is little or no pain. Hence the patient is less alarmed than he should be, by the mere dimness of sight, which, indeed, from only one eye being

generally affected, may scarcely attract his attention. Even photopsia, in the early stage, is not much complained of; in the last stage, muscæ volitantes form a constant symptom.

" Although, in by far the greater number of cases, all the textures of the eye suffer in this disease, on which account it may be designated as an *ophthalmitis*, it sometimes happens, that the inflammation is confined to one or two textures only. Thus in Case 6, the anterior crystalline capsule and the lining membrane of the cornea only were visibly affected with inflammation.

" The pulse varies from 84 to 120. Frequently rigors occur. The tongue is generally clean and moist. The pain entirely prevents sleep.

" *Diagnosis.*—The present disease is much more extensive, in respect to the number of textures affected, and much more intensive, in so far as the morbid action which is at work is concerned, than rheumatic ophthalmia, or rheumatic iritis; to which, however, in many particulars, it bears a resemblance. Yet, along with postfebrile ophthalmitis, we have neither the bounding pulse, the hot skin, nor the white and loaded tongue, which attend inflammation of the sclerotica and iris from mere exposure to cold. Neither is the blood drawn from a vein so buffy. The pain is not less distressing. Vision is much sooner, and much more seriously involved.

" Mr Wallace considers this affection of the eye as bearing so very striking a resemblance to syphilitic ophthalmia, that the one cannot be distinguished from the other, without particular attention to the history of the case. The absence of the tawny-reddish border which surrounds the pupillary margin of the iris, and there being tubercles on the iris in postfebrile ophthalmitis, will serve to distinguish the two diseases.

" The acuteness of the present disease will discriminate it from scrofulous iritis, to which, particularly in the appearance of the lens, it bears considerable resemblance, as well as in the degree in which the retina is affected.

"In some instances, postfebrile ophthalmitis bears a considerable resemblance to catarrho-rheumatic ophthalmis. Onyx, so frequent in the latter disease, I have not witnessed in the former. In one case I observed a considerable portion of the conjunctiva corneæ ulcerated, but never the ulcer which affects the proper substance

of the cornea, and which is so characteristic of the catarrho-rheumatic disease.

"The disease to which postfebrile ophthalmitis bears the nearest resemblance is sympathetic ophthalmitis, which results so frequently from incised and lacerated wounds of the edge of the cornea and sclerotica, and consequently of the annulus albidus of the opposite eye. The cause of the great similarity is, that in both cases the inflammation commences in the retina, advances to the iris, embraces all the internal textures of the eyeball, and ends, if neglected, in closure of the pupil, opacity of the crystalline, softening of the globe, and insensibility to light. The slightest inquiry into the history of the case will in either instance elucidate the origin of the affection.

"*Stages.*—Mr Wallace has described this disease as presenting two stages; the first amaurotic, and the second inflammatory. The cases above detailed sufficiently illustrate the accuracy of Dr Wallace's description. 'During the first stage,' says he, 'there exist amaurotic symptoms alone; and in the second stage, to the amaurotic symptoms are superadded the symptoms of inflammation. The length of time that the amaurotic symptoms exist before the occurrence of external redness, or of the visible symptoms of inflammation, is extremely uncertain, as also the period after fever at which the amaurotic symptoms commence. On many occasions the amaurotic symptoms, particularly a slight dimness of vision, with muscæ volitantes, have commenced at or even before the time of convalescence from fever, and yet the inflammatory stage has not supervened for weeks or even months; while on other occasions the dimness of vision has not commenced for several days, weeks, or even months, after the febrile attack, and has then been immediately followed by the symptoms of inflammation. It is to be particularly observed, that I have never seen a case in which, upon strict inquiry, amaurotic symptoms, more or less strongly marked, have not preceded the inflammatory symptoms. This is, in fact, one of the most remarkable characters of the disease. It is also to be noticed, that a similar distinction of symptoms is observable during amendment, for it uniformly happens, that the inflammatory symptoms subside a longer or shorter time before the amaurotic symptoms disappear, and often before they are diminished in severity.'

"The first and second cases which I have related, bore, not merely at the commencement, but all along, much more the aspect of amaurosis than of ophthalmitis. In one case which I saw, the patient was suddenly struck blind of the affected eye. In another case, already referred to, along with amaurotic symptoms, the cornea had become flexible, and, no longer apprehensive of inflammation supervening, I had commenced the use of quina and blisters, when suddenly pain and redness set in. I have met with several cases in which, for days, the principal symptoms have been pain in and round the eye, and dimness of sight. In other cases, there has been redness of the eye from the very commencement.

"*Predisposing and exciting causes.*—That an opportunity is left for the disease of the eye by the fever is plain; there may even be grounds for suspecting that the fever may have left the circulating fluids in an altered state, favourable for the production of the local complaint. However this may be, the affection of the eye is generally traceable to some exciting cause, and especially to cold. Sleeping in an apartment with broken windows, working in a cold damp shop, and washing the head with cold water, are mentioned in the cases as exciting causes. Using the eyes too early in sewing is another.

"*Prognosis.*—The recovery is tedious. In the majority of cases two months of uninterrupted and careful treatment has been necessary to effect a cure. That the disease, without any treatment, will wear itself out, is true; but the eyes will be left, as in Case XIII., useless, from the contracted and adherent state of the pupil, and the amaurotic condition of the retina. If trifled with, the cure will be imperfect; synchia posterior, muscæ volitantes, and other irremediable sequelæ, remaining. If taken early, and treated vigorously, a complete cure may be prognosticated. Recovery is much more speedy and complete in young subjects; in adults it is more tedious.

"Treatment.—1. *Depletion.* The wan appearance of many of the patients, the smallness of their pulse, and the state of general debility in which they are, might tend to deter from a use of the lancet. I am satisfied, however, that we can rarely, with safety, dispense with this remedy. The blood, drawn from a vein, is only in a few cases buffy. Often it is difficult, from syncope com-

ing on, to obtain more than a few ounces from the arm. When this is the case, leeches to the temples, and round the eyes must be had recourse to.

"If depletion is neglected, the recovery is very slow and uncertain; adhesions form, and cannot be got rid of, and vision continues imperfect. We must not be regulated by the pain alone, in taking away blood. Nothing relieves the pain so strikingly and effectively as venesection; but the state of the eye, independently of the pain, demands the taking away of blood. We should not even wait for the inflammatory stage of the disease, but relieve the congestion, on which the amaurotic symptoms depend, by the employment of depletion.

"Some cases, especially in children, I have trusted to leeching; but in adults, venesection is almost always necessary. I have not used arteriotomy, nor cupping, but have no doubt of their efficacy.

"2. *Purgatives.*—The tongue being generally clean, and the bowels regular, there seems to be little demand for purgatives. At the same time, I have found them of considerable use in the course of the treatment. Sulphate of magnesia, castor oil, and compound powder of jalap, are those I have most employed.

"3. *Mercury.*—I am decidedly of opinion, that the safest and the most effectual plan of cure embraces the use of calomel with opium, exactly as in the treatment of rheumatic or syphilitic iritis. This view of the matter is confirmed by the testimony of Mr Hewson, who seems to have trusted to opening the temporal artery, and giving a dose of three grains of calomel with half a grain of opium each night. Dr Jacob, also, found the use of mercury so certain and decisive in this affection of the eye, that he trusted to it almost exclusively. He gave two grains of calomel, and a quarter of a grain of opium thrice a-day. The mouth should be made sore, but not too suddenly, lest we be obliged to omit the medicine too prematurely.

"4. *Belladonna.*—The dilatation of the pupil is an essential part of the treatment. This is to be effected by liberally smearing the eyelids and eyebrow with the moistened extract of belladonna, morning and evening; directing the patient to renew its activity from time to time, by re-moistening it with his finger dipped in water.

"5. *Counter-irritation.*—Considerable benefit is derived from blisters to the temples and behind the ears, after due employment of depletion. They aid in removing the pain, lessening the inflammation, and recalling the power of vision.

"6. *Cinchona.*—Mr Wallace has keenly advocated the supremacy of cinchona as a cure for this affection of the eye. He thinks it has a specific influence over the disease; recommends it both when the patient is weak and seems to demand tonics, and when he is in full health; maintains the incurability of the disease by mercury; and is decidedly of opinion, that there must exist some source of error in Mr Hewson's account of the cases cured by this medicine. 'When I commenced the use of bark in this disease,' says Mr Wallace, 'I did not venture to employ it when the inflammatory symptoms were very severe, without preceding its administration by bleeding and purging. But latterly, whenever a case has presented itself, I have prescribed the bark alone, or simply with such medicines as were suited to the regulation of the bowels; and with the most decidedly good effects. Indeed, I have thought, that the abstraction of blood has, on some occasions, considerably retarded the cure; yet cases may occur in which bleeding and purging will be necessary.'

"I have not employed cinchona bark in powder, but the trials I have made of sulphate of quina have not led me to adopt any very high opinion of its efficacy in this disease. Some of the milder cases have yielded, in a great measure, to the combination of calomel and quina, such as Case 9. Case 5 was much benefitted by quina. In Case 10 it acted very slowly and imperfectly. On the whole, I feel indisposed to trust to this remedy; and on this point I find my views corroborated by the experience of Dr Jacob. 'In two cases which I met with,' says he, 'after the inflammation had subsided, and in which vision was as much impaired as if no remedies had been adopted, bark, in powder, had been administered for ten days. I gave trial to the sulphate of quinine myself in four well-marked cases for eight days, but finding no relief, had recourse to mercury, which effected a cure in the usual time.'

"I shall not unnecessarily extend this report, by commenting on the advantages to be derived from regulating the diet of the patient in this disease, and protecting him from cold; on the uti-

lity of warm fomentations, and anodyne frictions; nor on the problematical effects of such internal remedies as tartar emetic, colchicum, or turpentine, which I have not tried."

2. *Glandular swellings.*

Glandular swellings have not occurred frequently among my convalescent patients,—not at least when under observation. I can only find notices of enlargement of the superficial inguinal glands of the left side in one boy,—of the submaxillary glands in a man, and a girl,—of the right parotid and super-jacent lymphatic glands, which went on to suppuration, in a man,—and ending, as in the case of the old woman Janet Baillie, in an immense abscess.

3. *Boils.*

Boils have occurred in a few cases during convalescence, but never to a serious extent, except in one old woman in whom they considerably retarded convalescence.

Pustular eruptions have appeared around the mouth in a few, but this has generally taken place immediately after, or simultaneously with the crisis.

4. *Effusion into the knee-joint.*

Of this I have now seen three cases. All of those affected in this way had suffered, in recovering from the relapse, from pain in the knee—a very common occurrence. In two of the cases, I find no report of the treatment adopted, but I presume that it was similar to what I adopted the other day in the third case, in the Royal Infirmary:—viz., a blister dressed with iodine ointment, and the use of the hydriodate of potash internally.

5. *Swelled legs and ankles*

Are very common occurrences, especially, when the diet has not been sufficiently liberal, after the cessation of the febrile symptoms. Bandages, good food, and tonics generally remove the symptoms in a few days.

6. *Pain in the feet, with, and without swelling,*

Has been complained of by several females. Mrs Finney had acute pain in the feet unattended by swelling. It came on

some days after recovery, and continued after she had ceased to be a patient, and was discharging laborious duties as a nurse in the male wards of the New Fever Hospital. Others had severe pain in the feet, with swelling of them and the ankles.

7. *Paralysis of the deltoid, and other muscles*

Has been noticed in a few cases. In a female, aged 36, loss of power in both deltoids continued for about ten days, after restoration to health in every other respect had taken place.

8. *Sloughing of parts*

Has been observed only twice. It existed to some extent in the cellular tissue in the neighbourhood of the parotid abscess in Janet Baillie. In Mrs M'Kay, aged 55, there was sloughing of the pudenda, and of the soft parts covering the sacrum: she had a very tedious convalescence.

CHAPTER V.

TREATMENT OF THE DISEASE.

From all that I have seen and read, of the epidemic fevers of our own and other climates, I am induced most cordially to join in opinion with those physicians, who regard these diseases as produced by certain poisons, the deleterious effects of which have an inherent tendency to pass off, after having caused a definite train of symptoms. It is this which explains the large proportion of recoveries in the young, and those of sound constitution, although the cases be treated by methods different, nay even opposite, in their nature. A knowledge of this fact ought to teach the practitioner, that his duty is to watch anxiously, and be *ever ready*, but *never hasty*, to institute active interference, till special circumstances clearly indicate, that there is a necessity for it. "Our object must be," as Dr Thomas Watson remarks, "when the fever is once established, to conduct it to a favourable close—to 'obviate the tendency to death.' Upon this point, I agree most entirely with Pitcairn, who being asked, what he thought of a certain treatise on fevers, declared, 'I do not like fever curers. You may *guide* a fever; you cannot *cure* it. What would you think of a pilot who attempted to quell a storm?—either position is equally absurd. In the storm you steer the ship as well as you can, and in a fever, you can only employ patience and judicious measures to meet the difficulties of the case.'"[1]

Each individual case, as well as each epidemic, possesses certain peculiarities, requiring different kinds of treatment; and the only general rule which can be safely followed by the practitioner,

[1] Lectures on the Principles and Practice of Physic. By T. Watson, M.D. London, 1843; 2d volume, p. 710.

is that so correctly laid down by Cullen, and so urgently insisted on by Dr Alison, viz., "*to obviate the tendency to death; i. e.* to oppose those of the series of morbid changes occurring during the disease, by which the fatal event in any individual case appears likely to be brought about."[1]

The great practical question, then, which we have to consider, in reference to the prevailing epidemic, is, in what manner does death take place, and how can the tendency to it be best obviated?

At an early period of my experience, I became convinced, that there were three states most apt, either separately or conjointly, to cause death, and which, therefore, ought to be anxiously looked for, and, if possible, promptly corrected. They are

1st, *Congestion of the mucous membrane of the stomach and intestines, terminating in effusion of blood, and subsequent destruction of large portions of this tissue.*

2d, *Congestion of one or more of the abdominal viscera, particularly of the liver and kidneys, disabling them from the performance of their secretive functions, thereby causing bodies to circulate with the blood, which ought to be separated from it, and which bodies we know act as poisons when not so eliminated from, or when directly introduced into the circulation.*

3d, *Debility and sinking.*

4th, *It will also be necessary to speak of the measures to be adopted to prevent or modify relapses.*

The best means by which to prevent these evils are the cautious but steady use of purgatives, the determination of blood to the surface and extremities, and in some cases, its abstraction. When the kidneys are not performing their functions, a small bleeding from the lumbar region by cupping, or even a dry cupping, in those in whom depletion would be hazardous, proves of signal benefit. Of course, when there is debility and a risk of sinking, cordials and stimulants must be administered; and if, along with this,

[1] Outlines of Pathology and Practice of Medicine. By W. P. Alison, M.D., &c. Edinburgh, 1843; p. 449.

which is no uncommon case, there be nausea or vomiting, they must be combined with sedatives.

It has seemed proper to make these general statements, before speaking separately of the various therapeutic agents, which will now be done.

a. Abstraction of Blood.

This powerful method of interference for good or for evil, most naturally first claims our attention, as to it, have been ascribed numerous and great advantages. Several medical friends, who have visited the hospital, have urged me to practise it, both generally and topically, from the success which they imagined had attended it in many cases. I have been told, for instance, and that very confidently, that patients bled in an early stage of the fever, had always a short and mild attack, seldom relapsed, or became yellow, and rarely suffered, except to a very small extent, from muscular and articular pains. Though I certainly did not expect to reap these advantages from the abstraction of blood, yet, observing that the fever was attended, in its commencement, by much arterial excitement and congestion, it appeared to me both reasonable and justifiable, to make some experiments upon the effects of venesection in suitable cases. In most, if not in all the instances, the headach was either relieved, or entirely removed for a short time, and the hard and frequent pulse was rendered softer and slower. These beneficial changes were often not effects, though sequences of the bleeding; as was satisfactorily proved by the very same changes frequently occurring as suddenly and unequivocally in patients in the same wards, and affected in the same way, *who were subjected to no treatment whatever.*

The blood was drawn from the patient when sitting up, and allowed to flow till he either expressed himself as suffering less, or gave indications of approaching syncope. Few bore the loss of more than ten ounces, and several became affected with vertigo and faintness, after two or three only had flowed. Some persons, who whilst the blood was flowing, declared themselves quite relieved from the headach, within half an hour after the arm was bound up were found to be suffering just as much as ever. In fact, the severest headachs often ceased

spontaneously, and were always far more effectually and uniformly relieved by the combined operation of a purgative, a pediluvium, and the constant application of cold to the head and back of the neck.

In two of the cases referred to, delirium, intense general pains, and great debility, occurred in the relapse, and in one of them (Dallas) yellowness appeared, which was not the case in the first attack. Both of these persons were bled by Dr Heude, during my absence for some days in the country, so that I did not witness the first effects, which were favourable; but when I returned, they had almost recovered from the first attack of the fever, and did not then seem to be worse than some others, who had been treated in the usual way.

If ever there was a case in which the pulse, the general appearance, youth, and robust strength of the patient, indicated the propriety of bleeding in this disease, it was in that of John Ritson, admitted in the fifth day of the fever.

Case XXVI.—Summary.—*Severe headach and articular pains. Relapse on the 14th day. Quinine tried in large doses.*

John Ritson, a strong sailor, native of Sunderland, aged 19, of sanguine temperament, fair, florid, much sun-burnt, with light hair and eyes—who has been on board of ship, at Leith, for the last four weeks, since his return from Nova Scotia, was

Admitted, 20th September, (fifth day.) He states, that he is generally pretty sober, and has been quite so of late: his health has always been good; he has had full, but easy employment, and the enjoyment of every comfort, since his arrival in port.

On the morning of the 17th, he was seized with headach, and burning heat of skin, followed by sweating, after which, he had rigors. For the last two days, he has had pains in the joints, and last night, great uneasiness of the epigastrium, accompanied by vomiting, came on. He is not aware of having been exposed to contagion.

His face is intensely flushed; the expression is rather contracted, and slightly anxious; the pulse is 108, and of good strength; the tongue is coated with a white creamy fur; he has much thirst; the last stool which he had was yesterday, from medicine

previously taken: the skin is soft, and tolerably cool; his sleep at night is little, and disturbed: the intellect is clear: he complains of severe headach, pains in the joints, and much feebleness in the limbs; there is a good deal of pain at the epigastrium; and increased dullness in the region of the spleen, which, however, cannot be felt below the ribs. During the writing of this report, he has become very cold, and has at present (5 P.M.) some rigors.—*Habeat statim enema purgans.—Habeat pil. colocynth. comp. ij nocte.—Abradatur capillitium, et applicetur assidué aqua frigida toto capiti.*

21*st September*, (*sixth day*). The symptoms are much the same as they were yesterday, excepting that the headach is rather increased, since a fit of vomiting which he had about midnight; after it, the pain in the epigastrium was considerably relieved: it still continues to a certain extent. The bowels were freely opened by the enema. The hair has been cut; but cold water has not been applied, according to the prescription of yesterday. The pulse is 104, and of moderate strength. He has great thirst: the urine is abundant.—*Cold water to be applied to the head; an emetic of* 12 *grains of sulph. zinc, to be administered immediately; and the feet to be bathed in hot water at night.*

22*d September*, (*seventh day*). He is rather better than yesterday. The prescription was followed out; the emetic operated freely, and there has also been considerable evacuation from the bowels; he slept well after the bathing of the feet. Pulse 104, of the same strength as yesterday; the thirst continues; the tongue is cleaning, and is moist. The countenance has lost a good deal of the intensity of the red flushing, and is beginning to assume the bronzed aspect.—*Continue the cold to the head; to have no medicine of any kind.*

23*d September*, (*eighth day*). The headach is relieved. The pulse is 70. The bowels are open; and he is going on well in all respects.—*Quiescat.*

24*th September*, (*ninth day*). The pulse is 64, and small. The bronzing has become more characteristic. Some general abdominal pain is complained of; an excessively faint dark stripe extends from the umbilicus to the pubes. There is much general pain over the whole body.—*Habeat olei ricini ℥iss, statim.—Habeat haustus cum solutionis muriatis morphiæ ℥ss, horâ somni.*

25*th September*, (*tenth day*). He had the draught, and slept well. The bowels are open.—*Quiescat.*

28*th September*, (*thirteenth day*). On the 26th, he was ordered pills containing 3 grains of quinine,—to take six of them during each 24 hours. He appears to be quite well, makes no complaint, and is allowed to rise. He has taken 23 of the pills.

29*th September*, (*fourteenth day*). He is in every respect quite well, and has a great appetite.—*To have full diet, and a pint of ale.*

30*th September*, (*fifteenth day*). About 10 A.M., he was seized with violent headach, and there has been some return of the general pains, and slight rigors.—*To have low diet.—Cold to the head.—Intermittantur pilulas quininæ.*

1*st October*, (*sixteenth day*). The skin is very hot; he has sweated none since the relapse; the pulse is 108, and of moderate strength. There is some general uneasiness in the abdomen; it is not increased by the descent of the diaphragm, which goes down easily. The bowels are confined.—*Continue cold to the head.—Habeat pulveris jalapæ compositæ ʒiss, statim.*

2*d October*, (*seventeenth day*). He slept none last night, and has had no sweating; he feels sick, and is worse than yesterday: the headach is increased; there are no general pains, but a feeling of debility; the pulse is 132, full, and not hard; the skin is dry and hot, but soft; the bowels were only once opened by the jalap: the tongue is white and moist; he has much thirst.—*Habeat enema purgans.—Habeat haust. c. tinct. hyoscyami ʒi, horâ somni.*

3*d October*, (*eighteenth day*). He slept some in the first part of the night, but was awakened by a fit of rigors. The skin is soft, with some tendency to moisture; the pulse is 120, sharp, and tremulous at times. He has had a good deal of nausea, with some vomiting. There is a degree of double vision this forenoon. The countenance is pale, exhibiting an unequivocal bronzing.—*Habeat pulv. opii, gr.ij, conserv. ros. q. s. ut ft. pil. ij.—Habeat j statim, et repetatur, horâ somni.*

4*th October*, (*nineteenth day*). Sweated much immediately after the visit yesterday, and continued so till about 4 o'clock this morning, when his shirt was changed. He has had the two pills; but has slept none. The bowels were opened to-day. The tongue

is coated with a white fur. The pulse is 84, soft, and of good strength.

6*th October*, (*twenty-first day*). The bowels were opened by medicine. He is going on well, and has no complaint.

7*th October*, (*twenty-second day*). He seems quite well, and is allowed to take exercise in the green for an hour.

9*th October*, (*twenty-third day*). Dismissed cured, and strong.

In this instance, nature, assisted by the diligent application of cold water to the head, and hot water twice applied to the feet, and a drachm dose of the compound powder of jalap, accomplished all that could have been desired from general or local depletion.

It is supposed by some, that leeching is less objectionable than general bleeding; but I think, that the contrary of this proposition is often the truth. In opening a vein, and allowing the blood to flow, when the patient is sitting up, we have in the effect produced at the time, an accurate index by which to regulate the quantity to be taken; and then, it is almost always easy to arrest at pleasure the flow of blood from the brachial vein. With leeches, it is different; and especially in the present epidemic, where the tendency to hæmorrhage, and the difficulty of arresting it are so great, that I have several times seen alarming depression caused by the oozing from one or two leech bites, between the time when they had been removed in the afternoon of one day, and the noon visit of the next. The special objection to leeching, is the danger of causing the loss of an uncertain quantity of blood. In the case of Mullans, already described, (page 12), it is recorded, that the leech bite bled little; but this was an unusual occurrence, and must be attributed to the diligent and free application of cold water,—means which, however, were not always found effectual in accomplishing this end.

Subsequent to the occurrence of Ritson's case, a boy was cupped for pleuro-pneumonia. In the circumstances, the treatment seemed called for, and had the desired effect of subduing the inflammation, but the recovery was, for a long time, most tedious and uncertain, notwithstanding the liberal exhibition of wine and porter. In a case which occurred previous to that of Ritson, in

which there was no secretion of urine, stupor, and delirium, a cupping in the lumbar region was resorted to, with very great benefit.

In several cases of pulmonary inflammation, of various forms and degrees, I have seen all the symptoms disappear under the use of antimony and morphia combined; or the liberal use of the morphia and ipecacuan lozenges. These remedies, when used along with fomentations, sinapisms, or blisters, are safe, and generally efficient substitutes for local bleeding, in thoracic complications. As the result of my experience, then, in this matter, I would say, that the cerebral, pulmonary, and abdominal complications, in which it is proper to extract blood, are extremely rare, and that, in very many such instances, it is a most hazardous practice. The statements which have already been made, sufficiently justify this opinion, so far as the cerebral and pulmonary symptoms are concerned; and with regard to the abdominal affections, this will be equally easy.

In some of the most severe and threatening cases of abdominal pain, and extreme tenderness on pressure, the patients have been well brought through, simply by the diligent use of copious warm poultices and fomentations. Enlarged and tender spleens have often done well with this simple treatment. I do not mean to say, that it would be proper in all such cases to abstain from abstracting blood; but am anxious to point out, how exceedingly valuable these remedies are, and how much safer it is in weak persons to rely on them, than take away any blood. Francis Rose, (*vide* p. 60), when far spent in strength, was seized with acute symptoms of enteritis and diarrhœa. A little morphia was added to the whisky which he was taking to sustain his feeble and fluttering pulse, and his abdomen was most assiduously fomented. Contrary to all expectation, the symptoms abated, and recovery ensued. Depletion in any form would, I think, have killed him.

In robust females, in whom the menstrual discharge has become suppressed, or in others, in whom any flux has been stopped by the fever, or in those of apoplectic tendency, the propriety of bleeding may be a legitimate question to entertain. It is one which I have more than once had difficulty in deciding for myself, but I must say, that I have never had occasion to regret, that

almost always, it was ultimately resolved, not to bleed. It is, however, one of those points regarding which it would be absurd to inculcate obedience to any routine directory.

As to a full bleeding cutting short the fever, I have no results of experience to offer on either side. Granting that it were justifiable to make this point the subject of experimental investigation, it certainly would not be possible to do so, upon a sufficiently extensive scale to yield results of any value, in the Royal Infirmary or Fever Hospitals of Edinburgh, as the patients (excepting the house officials) are, with a few exceptions, some days affected with the disease, before admission.

b. Medicines which act on the Skin.—During the first fortnight, I was in the habit of giving the aqua acetatis ammoniæ, Dover's powder, James' powder, ipecacuan, antimony, &c. in various forms and doses, as sudorifics and diaphoretics; but as I saw, that those who got none of them sweated as much as those who did, they were altogether abandoned. The Dovers' and James' powders were often found to be worse than useless, by exciting troublesome vomiting. Blisters and sinapisms were occasionally employed as general stimulants for the relief of vomiting, and as counter-irritants in chest affections. For the latter purpose, croton oil was also used.

c. Application of heat and moisture to the skin.—Although of opinion, that all diaphoretic and sudorific drugs are of little advantage, and that violent sudorific doses are injurious, I am yet of opinion, that I have very often seen the best possible results from other means employed for the purpose of diaphoresis and sweating, such as the wet blanket, the partial warm bath, and tepid sponging. The general warm-bath is apt to produce exhaustion. I had three young patients affected with ardent fever, and dry hacking cough, closely wrapped up in a blanket wrung out of hot water. Above this were placed several dry blankets. They sweated most copiously from ten to fourteen hours, and were then removed to a dry bed, where they all sweated again so freely as to require to have their linens changed. They emerged from this sudorific regimen, perfectly free from fever, cough, and pains: but excessively weak and languid. A child of four years

old, when in the initial rigors of the relapse, was treated in the same way with equal benefit. I was led to try this plan, from having recollected that Dalrymple, in the fever of Carthagena, in 1740, and Jackson subsequently in the yellow fever of the West Indies, had found that decided and immediate benefit resulted from rolling the patients in blankets wrung out of hot salt and water. Had the supply of bedding been adequate, this method would have been in general use. Sponging with hot and tepid water was very useful, and grateful to the patients; but the staff of nurses was not sufficient to have it tried satisfactorily to any great extent. Bathing the feet and legs in hot water, was found to be signally beneficial in allaying restlessness, and disposing to sleep. Hot poultices and fomentations, in all the abdominal complications, with or without headach, have been found of signal advantage.

d. Application of cold to the surface.—Cold water to the head was, in general, found to be quite sufficient to allay the headach, if diligently used. In a few instances, muriate of ammonia, and other evaporating lotions were used. The aspersion of the arms and chest with cold water, had the effect of calming several restless and irritable patients. Dr Heude became much more composed and easy, after the continued bathing of his arms in very cold water for some hours.

When the skin is dry, and its temperature above the healthy standard, cold water may be safely applied, at least to a part of the surface; and to the patient, this is always exceedingly grateful. The effect produced will best regulate the quantity to be used, the surface to be acted on, and the time during which the application is to last. Of course, when any chilling results, the cold affusion must be stopped. If the application of cold water is deemed safe, the wet sheet of the hydromaniacs is not to be despised. It was a favourite remedy of Bancroft in the yellow fever of Jamaica, long before cold water became the watchword of a sect of ignorant, gasconading empirics. It was more from want of an impression of its necessity, than an apprehension of its danger, that I never tried this plan.

It would be wrong to leave this subject, without remarking, that unless the skin be very hot and dry, the cold affusion is

dangerous. A neglect of this precaution, and a persistence in its use, after the surface had become chill, has, we must remember, in the hands of the younger Frank and others, caused the supervention of pneumonia.

e. Warm drinks are found very beneficial alone, or as adjuvants, in disposing to sleep, when administered early in the night, as soon as quiet is established in the ward.

f. Cold drinks must be used in moderation, as they are apt to excite vomiting and pain in the epigastrium. Cold water, flavoured with oat-meal, and decoction of barley, are, from motives of economy, what I have latterly restricted the patients to. Of course, in private practice, when the patients wished them, various agreeable drinks may be prescribed, such as lemonade, soda water, &c. I may here remark, that I often found hospital and other patients get more relief from thirst, by allowing some small crystals of citric acid to dissolve in the mouth, than from any other thing which they tried for the same purpose.

g. Purgatives.—The steady and cautious use of purgatives forms a most important part of the treatment. The great aim in administering these medicines, in this and other fevers, should be to clear out the bowels fully, and if possible, daily,—at the same time, carefully avoiding such substances and doses as might cause gastro-intestinal irritation, or debility from catharsis. In the early days of the fever, in cases where there was no abdominal tenderness, and a strong pulse, I have found the compound powder of jalap very suitable and safe. The compound colocynth pill, combined with the blue pill mass, was also often selected, and found appropriate in these circumstances. From five to six grains of calomel is a good purge. If there seems to be a risk of its being rejected, it answers very well to combine with this, a quarter, or half a grain of opium, a method which will also be found specially convenient with the bulky purgatives. The same object may be gained by administering, either a few minutes before, or along with the purgative, an ounce of the creasote mixture of the Edinburgh Pharmacopœia. The black draught of sulphate of

magnesia and senna was sometimes given to assist the operation of other purgatives. When, as was very frequently the case, flatulence existed along with constipation, the compound aloes and assafœtida pill was used with the best possible effects: as were likewise turpentine enemata.

As the object which I had in view in administering purgatives, was frequently, not to produce a discharge of serum from the mucous membrane of the bowels, but simply to clear away the accumulating sordes and feces, castor-oil was the drug most commonly selected, on account of its operation being generally mild and uniform. If the patient had a great repugnance to this medicine, and another, nearly as suitable, was asked, it was given, with a view to prevent the excitation of vomiting.

The action of purgatives was often assisted by domestic enemata; and when there was nausea along with obstinate constipation, infusion of senna, turpentine, croton oil, and other energetic substances were injected into the rectum, the drug used being selected according to the necessities of the case. It was only when there was a tendency to coma, and in a few very obstinate cases of constipation, that the more violent purgatives were given by the mouth.

Among the violent purgatives, I must not be considered as classing croton oil, as in spite of its activity, it does not, if given in a moderate dose, produce irritation. I have seen a patient, after having had eighteen stools from a dose of it, little, if at all exhausted, after the purging was over. I have heard Dr Christison and others make statements to the same effect. Given in doses of one, two, or three drops, I never saw it produce abdominal irritation or debility, when administered either in fever or other diseases. Its operation has the advantage of being rapid, and soon over. It seems sometimes to produce a soothing effect, in addition to its moving the bowels. There is probably much truth in the opinion which Mr Harket expresses regarding it as a suitable purgative in yellow fever. "Its power," says he, "in allaying gastric irritability and general nervous excitement, as well as restoring the circulation to the surface, and thus relieving the congestive state of the internal and deep-seated central vessels, is really extraordinary; and though I have seen it for the moment

when first given, increase the irritability, yet after a little time, I have hardly ever seen it fail in producing the desired end."[1]

h. Medicines which act on the kidneys.—When the urine was particularly scanty and scalding, and pain complained of in the loins, these symptoms have been considerably alleviated by administering the nitrate of potash, the spirit of nitrous ether, and other diuretics. A powder, consisting of twenty grains of carbonate of soda, and ten of nitrate of potash, may be administered every two or three hours. Warm fomentations to the loins, cupping, &c., act most admirably in exciting the kidneys to renewed secretion, it is to be presumed, by preventing or moderating the congestion of these organs. When certain alarming head symptoms occurred, associated with suppression of urine, I have always directed the treatment to the kidneys, rather than to the head, from a belief, that the urea, not being thrown off in the natural way, was acting as a poison. The cases, however, in which such a line of treatment is indicated, are very few in number.

i. Medicines used to check the vomiting.—Pure opium, or this drug in some form, was usually selected—as it generally happened, that there co-existed with the vomiting, other indications for the exhibition of it, or some of its preparations. A favourite prescription—for which I am indebted to the example of Dr Alison—is a drachm of the solution of the muriate of morphia in the form of clyster. Vomiting of the most urgent kind, when nothing is retained in the stomach, is sometimes checked, and most commonly moderated, by this means. No medicines answered the various ends for which they were given more effectually than

[1] It is remarkable to see somewhat opposite opinions given by Christison and Pereira, regarding this purgative. The former says: "It is distinguished from other powerful purgatives, by occasioning much borborygmus, by its action commencing speedily and ending soon, and by the cathartic effect, however brisk and exhausting at the time, being followed by comparatively little debility." *Dispensatory*, p. 382. Pereira, on the other hand, remarks: "In comparing croton oil with other violently acrid purgatives, we find it distinguished by its speedy operation, the great depression of the vascular system, as well as the general feeling of debility which it produces, and by the uncertainty of its operation." *Second edition*, vol. ii. p. 1115.

opiates. When, from any cause, they were deemed improper, the creasote mixture, in often repeated ounce doses, was substituted,—in general, with complete success. I never prescribed the hydrocyanic acid in the hospital, from fear of mistakes occurring through the ignorance of the nurses and patients. In some very obstinate cases of vomiting and hiccup, in which both the opium and creasote failed, timidity on this score was the only cause of its not being exhibited. In private practice, I have used it, in the vomiting of this fever, with signal benefit in two cases, where the patients had an extreme and prejudiced dislike, both to opium and creasote. Blisters and sinapisms to the epigastrium, were often employed alone, or as adjuvants to check vomiting. They are very useful.

k. Mercurials.—In this, as in most other fevers, the tolerance for mercury is very great. This remark, must, of course, be held as applying only to the pyrexial period; I have several times had my patients accidentally salivated during the intermission, by two or three pills having been used as aperients, consisting of two and a-half grains of the compound colocynth, and an equal quantity of the blue pill masses. It was also uniformly observed, that when salivation was caused by mercury given during the fever, it occurred simultaneously with, and not as a precursor to, returning health. These facts, therefore, leave us in doubt as to the amount of benefit to be ascribed to the mercury. A large part of the success might probably depend upon the opium which was given in combination with the calomel; and this, along with the necessary support of the strength by stimulants, would possibly, in all the cases referred to, have been sufficient to carry the patient safely through the fever, if such a termination were at all possible. As to whether advantage was derived from the mercury in the yellow and other highly congestive cases, each reader can judge for himself, from the cases reported in this memoir.

It may somewhat assist in forming an opinion on this subject, to glance at the experience and statements of physicians regarding the use of mercury in some notable epidemics of yellow fever.

At one time, we find this drug in high repute as a remedy in yellow fever, and at another, declared to be worse than useless. In 1793, Chisholm who employed it extensively in Grenada, was a strong advocate for salivation, styling mercury "the best aid in the treatment of yellow fever;" but his narrative of cases does not justify this estimate of its curative powers. He gave it from a belief that the liver was the chief seat of the disease. This physician held, that the more difficult it was to salivate, the more malignant was the fever; in some cases, he found that 2000 grains of calomel failed in producing any constitutional effect, whereas it was caused in others, by so small a quantity as ten grains! This certainly leads us to conclude, that the cases in which the mercury produced a beneficial effect, were in themselves mild. Clarke, Fergusson, and others, equally with Chisholm, advocate the mercurial system, as the most efficient in restoring the secretions, and exciting the capillaries. They state, that whenever there is evidence of the mineral having affected the constitution, the indications of amendment begin to appear. This, it need hardly be remarked, is hasty and inconclusive reasoning. Many of the cases which seem to be benefited by the mercury, might have recovered spontaneously without it. Perhaps there would have been fewer advocates for salivation, if this simple view of the matter had more generally suggested itself to candid inquirers.

Bancroft declares, "that after some experience, assisted by no ordinary portion of inquiry and information, he had not been able to discover that the salivators were more successful than the others, and if not more successful, their practice has certainly been hurtful, because in most of the persons who have recovered, the (perhaps useless) salivation retarded the convalescence, and produced very troublesome affections of the tongue, mouth, and throat, with other ill consequences, as is well known and acknowledged, even by its advocates."

This remark of Bancroft is equally applicable to all the cases which I have salivated in the prevailing epidemic.

Dr Rush, in his account of the yellow fever of Philadelphia, in 1794, says, "mercury seldom salivated, until the fever intermitted or declined. I saw several cases in which the salivation

came on during the intermission, and went off during its exacerbation, and many in which there was no salivation, until the morbid action had ceased altogether in the blood-vessels by the fever."[1] Dr David Grant, in his Essay on the yellow-fever of Jamaica, avers, and probably with perfect truth, that he "has seen more victims to the mercury, than to the fever." (P. 51.) Enough has been said to show the fallacies into which even candid mercurialists are apt to be led, and that is the only object we had in view in introducing these historical details.

Many upon reading my cases, might suppose that the mercury exhibited was an active agent in the cure, and I am anxious to state, that whether it be so or no, the evidence is not sufficient to decide the question, and is upon the whole rather against the belief that it was beneficial.

In the yellow cases which I have had since this memoir went to press, mercury has never been used, except in one instance, I think, when calomel was administered for the sake of opening the bowels; and the cases have gone on at least as well as formerly during the pyrexial stage, and convalescence has been more rapid, from there being no retardation of it from sore mouth.

As the biliary secretion is excessive, and not diminished in the yellow patients, it seems absurd to give a medicine, which unquestionably acts as a direct stimulus on the liver. The more rational treatment is to counteract the already unduly active state of the organ, and if that cannot be done, to clear away the superabundant bile from the alimentary canal, by suitable emetics and purgatives; and at the same time, take all other possible measures to prevent its causing undue irritation there.

l. Remedies to relieve the muscular and arthritic pains.—After a very extensive trial of colchicum, both in large and small doses, I have come to the conclusion, that any relief which the patients experienced, could not be attributed to its operation. I have sometimes fancied, that the hydriodate of potass gave some ease; and in convalescence—during which the pains are most severe—it is unquestionably a very seasonable remedy, as it ge-

[1] Rush's Medical Inquiries and Observations, vol. iv. p. 94.

nerally increases the urinary secretion, and sharpens the appetite. When arthritic pain is combined with, or followed by, effusion, the hydriodate has been given with advantage, both internally and externally.

Returning strength generally banishes the pains; and friction with the soap and opium liniment enables the patient better to endure them.

Within the last few days, at the recommendation of Mr Fleming, I have tried the tincture of aconite as an external application; but some time must elapse before an opinion regarding its efficacy can be given.

m. Tonics.—Tonic remedies are of much advantage during the intermission, and in convalescence. The particular substance to be selected must depend somewhat upon the circumstances of the case. I generally begin with casparia or cascarilla; and after a few days, prescribe one of the mineral acids in small doses, three times a-day,—or quinine, in the form of powder, pill, or potion, as may be most agreeable to the patient. Given simply as a tonic, from one to two grains of quinine twice or thrice a-day, have appeared to be a sufficient dose. In some patients, who have come in much exhausted from previous attacks, the saccharine carbonate of iron, and other chalybeates, have been found very serviceable. In persons known to be addicted to ardent spirits, quassia was the tonic often preferred; and it seemed to suit remarkably well. Port and sherry wines are the best tonics, but of course are too expensive to be used as common hospital remedies.

n. Astringents.—Astringent remedies are required occasionally, as when diarrhœa, dysentery, bronchitis, &c., complicate the cases. The only astringents which I have had occasion to prescribe, have been the chalk mixture of the Edinburgh Pharmacopœia, the acetate of lead, and opium, singly, or one of the former combined with the latter:—except in a few obstinate cases, in which the logwood was used. Of course various other astringent remedies might have been used with equal propriety. In two cases of very troublesome chronic bronchitis, the acetate of lead combined with squills, proved of remarkable ad-

vantage;—the formula used, was that recommended in certain cases of this kind by a recent writer,—I think by Professor Henderson,—viz., a pill consisting of four grains of the acetate of lead, and one of squills. In the cases referred to, one of these pills was taken six or eight times, at intervals of four hours; after this, they were used less frequently, so long as the symptoms continued. I regret that I have not made trial of the astringent powers of gallic acid in some of the cases of profuse menstruation,—a remedy which has of late been brought into considerable repute by Professor Simpson.

o. Specific febrifuges.—No observations worthy of being recorded, have been made with this class of remedies. The chlorinated solution of soda has been frequently prescribed, but nothing can be said of its therapeutic value;—the patients were not injured by it.

The administration of large doses of neutral salts has been contemplated in several bad cases, but never, as yet, actually practised. Dr Stevens recommends this mode of treatment in yellow and other malignant fevers, from a belief that the black colour of the blood depends upon an excess of acid; and he as well as others have spoken strongly in favour of its practical advantages.[1]

p. Diet.—The regulation of the diet, from the moment that the appetite begins to return, ought to be a matter of the most special attention. When there has been much abdominal congestion during the febrile period, accompanied by debility, bland, nourishing, but not over-stimulating, food is required. Weak beef-tea, as a drink, arrow-root with a little wine to dinner, and tea and bread, in the morning and evening,—have sometimes been ordered in preference to the low diet of the hospital; but whenever the circumstances of the patient admitted of it, extra articles of

[1] The theory is ingenious, but much of the reasoning by which it is supported is unsound; and the statements made regarding its efficacy in the West Indies, are greatly though not intentionally exaggerated. Those who wish to understand the merits of this question, cannot do better than read the work of Dr Stevens on the blood, and a letter by Dr Hacket in the 17th vol. of the Medico-Chirurgical Review.

food were not employed, and the ordinary diets of the house were prescribed. The authorised diet tables are subjoined, that the reader may the better understand the prescriptions regarding diet, to be found in the reported cases.

DIET TABLE OF THE EDINBURGH ROYAL INFIRMARY.

I.—LOW DIET.

Breakfast,	Bread,	3 oz.
	Tea,	½ pint.
Dinner,	Panado, Bread,	3 oz.
	Milk,	2 oz.
	Sugar,	¼ oz.
Supper,	Bread,	3 oz.
	Tea,	½ pint.

II.—RICE DIET.

Breakfast,	Bread,	3 oz.
	Coffee,	½ pint.
	An Egg.	
Dinner,	Beef-Tea,	⅘ pint.
	Rice-Pudding.	
Supper,	Bread,	3 oz.
	Tea,	½ pint.

III.—STEAK DIET.

Breakfast,	Bread,	6 oz.
	Coffee,	½ pint.
Dinner,	Potatoes,	16 oz.
	Beef Steak,	4 oz.
	Broth,	1 pint.
Supper,	Bread,	6 oz.
	Tea,	½ pint.

IV.—STEAK DIET WITH BREAD.

The same as No. III. except that 6 oz. of *Bread* are substituted at Dinner for Potatoes, and ⅘ of a pint of *Beef-Tea* for Broth.

V.—COMMON DIET.

Breakfast,	Bread,	6 oz.
	Coffee,	½ pint.
Dinner,	Potatoes,	16 oz.
	Broth,	1 pint.
Supper,	Bread,	6 oz.
	Tea,	½ pint.

VI.—COMMON DIET WITH BREAD.

The same as No. V. except that 6 oz. of *Bread* are substituted at Dinner for Potatoes.

VII.—FULL DIET.

Breakfast,	Porridge,	1½ pint.
	Butter-Milk,	1 pint.
Dinner,	Boiled Meat,	6 oz.
	Potatoes,	16 oz.
	Bread,	3 oz.
	Broth,	1 pint.
Supper,	Potatoes,	16 oz.
	New Milk,	½ pint.

VIII.—FULL DIET WITH BREAD.

The same as No. VII. except that *Bread* 8 oz. is substituted for Potatoes and Bread at Dinner; and *Bread*, 6 oz., for Potatoes at Supper.

IX.—EXTRA DIET.

Breakfast,	Porridge,	2 pints.
	Butter-Milk,	1 pint.
Dinner,	Boiled Meat,	8 oz.
	Potatoes, 1¼ lb.	20 oz.
	Bread,	3 oz.
	Broth,	1 pint.
Supper,	Potatoes, 1¼ lb.	20 oz.
	New Milk,	¾ pint.

1. Each Pint of Porridge to contain Three Ounces of Oatmeal.

2. Each Pint of Broth to contain One Ounce of Barley, Three Quarters of an Ounce of Vegetables, and to be made with Butcher-Meat in the proportion of Two Ounces of Butcher-Meat to each Pint of Broth.

3. In all the Diets, the weight is to be understood as applying to the food before being cooked.

By authority of the Managers,

(Signed) James Hope, *Clerk to the Incorporation.*

Edinburgh, 26*th June* 1843.

These different diets are upon the whole well adapted for all ordinary circumstances; perhaps the omission of porridge to breakfast, in the common diet, is unfortunate, as few of the patients like to breakfast without it. The dinner pudding, again, in the rice diet, is so sweet as to disagree with very many.

q. Treatment to prevent or modify relapses.—The result of many trials with sulphate of quinine in all doses, is—that it may often be made to modify and delay, but seldom to prevent relapses. Of late, I have trusted more to general tonic treatment, careful regulation of the diet, and good nursing, than to any special antiperiodic treatment.

Having expressed this opinion of the sulphate of quinine, it may be well to quote one of the cases in which *it seemed* to prevent a relapse.

Case XXVII.—Summary.—*Crisis by sweating on the night betweeen the 7th and 8th days.—No relapse. Treatment, quinine, &c.*

Robert Watson, Scotch, married, aged 47, a weaver from Paisley, of spare but strong make, having dark grey hair, light eyes, and a weather-beaten countenance, was

Admitted, 25th September, 1843, (*fourth day.*) He states, that he has been in Edinburgh only one day. Owing to want of employment in his own trade during the last two years, he has been obliged to take any kind of work for which he was fit; and lately he has been driving cattle. During these two years, he has been frequently pinched for food. He had fever about 25 years ago.

He took ill on the 22d, with headach and pain in the eye-balls, shivering, and a feeling of weakness. These symptoms continued, and there was superadded entire loss of appetite. He ascribes the origin of his illness to cold and fatigue.

His pulse is 96, of good strength; the tongue is brown, but moist; there is much thirst; the bowels are confined; the skin is hot, and dry; there is no eruption; he has severe headach; the intellect is clear; he has a bad taste in the mouth, and feels very much depressed.—*Applicetur aqua frigida capiti.*

26*th September*, (*fifth day.*) The headach is easier; the other symptoms are much as yesterday.—*Injiciatur enema purgans statim.*

27*th September*, (*sixth day.*) His bowels were opened by the enema; the pulse is 90, of good strength; the skin is hot and dry; he has a good deal of headach; there is slight bronzing of the countenance.—*Continue the cold applications to the head.*

28*th September*, (*seventh day.*) The headach is much relieved, but he complains of confusion of ideas; the pulse is 104; the tongue is parched and chapped; he has had several stools. He slept none during the night.—*Habeat haustum c. solutionis muriatis morphiæ* ʒss *h. s.—Habeat vini rubri* ʒiv.

29*th September*, (*eighth day.*) He is much better to-day. He slept, but was unconscious of it, sweated profusely, and was greatly troubled with dreaming. The pulse is 72, and stronger than yesterday; the tongue is moister, but still chapped; he has had two stools to-day.—*To have a pint of ale instead of the wine.*

30*th September*, (*ninth day.*) He is improving.

1*st October*, (*tenth day.*) He slept last night without a draught, and is greatly improved. The tongue, skin, and pulse are natural; the bowels are confined.—*Habeat pulveris jalapæ compos.* ʒiss, *statim.*

6*th October*, (*fifteenth day.*) As he feels pretty strong, he is allowed to rise. He complains of slight pain in the shoulders.—*R. sulphatis quininæ* ℈i, *acidi sulphurici diluti* ʒi, *infusi gentianæ* ʒiv. *Sumat unciam sextâ quâque horâ.*

9*th October*, (*eighteenth day.*) He is quite well; he finished the mixture this morning.—*Continuatur mistura quininæ.*

19*th October*, (*twenty-ninth day.*) He has been in perfect health since last report, and is to-day dismissed cured, having had no relapse. The quinine mixture has been continued till now, with the exception of the 12th, on which day it was omitted, not because it had caused, but lest it should produce headach.

The relative expense of the treatment of different hospital physicians is very striking, and extraordinary. In a return to the Managers now before me, I find that the monthly expense of each bed varied, in different wards, during the months of September and October last, from 11s. to 19s. 1d. This private

official document to which I refer,—and which I have no right to quote except as regards myself,—states that my monthly average expense during that period, when I had never under 84 beds, was at the rate of 12s. 10d. each.

A very erroneous idea of the severity and duration of the disease may be entertained, by looking only at the long stay in hospital of many of the patients. The dismal desolation and poverty of some of the poor families, made it often imperative to keep in patients long after they were better of the fever. An orphan boy, for instance, who lost both father and mother, and had no home to go to, could not at once be cast a-drift upon the town; and with young respectable females, without home or friends, the difficulty in deciding how to act was often extreme. Often have I known that heads of families, dismissed in good health, but too feeble to resume their employments, have gone back to their cheerless homes, only to pledge the few articles of furniture which they possessed, and thus at once get involved in difficulties, from which they never could extricate themselves.

I cannot imagine any thing which would have a more powerful effect in repressing juvenile prostitution, theft, and kindred delinquencies, as well as in preventing the spread of cureless poverty, and its constant companion, desolating disease—than a large and well managed Convalescent Hospital. Is there no influential citizen in Edinburgh of sufficient energy to move the public in good earnest, in behalf of so noble an enterprise?

CHAPTER VI.

STATISTICS OF THE DISEASE.

It was intended to have given tables showing some of the circumstances of the patients, as to exposure to contagion, the crowding into small rooms, and their comparative poverty or comfort; but the irksomeness of this labour causes them, at least in the mean time, to be delayed. It may, however, be stated, as the general impression left upon the mind by the inquiry, that poverty cannot be said to be the cause of the prevalence of the present fever, except in so far as by inducing general debility, it predisposes to disease, and especially to any prevailing epidemic. The crowding of persons so predisposed into small and ill-ventilated apartments is, there can be no doubt, at once the main cause of the spread of the epidemic, and also of its confinement in a great measure to the habitations of the poor.

The subjoined tables exhibit at a glance the statistics of the relapses, along with some other facts regarding the cases. In reference to the date of the relapse, it may be stated, that the late occurrence of it in many cases is supposed to be owing to the special treatment adopted. Some of the relapses were so extremely short and slight—especially those treated by anti-periodic remedies—that they would certainly have often been overlooked, had the cases not been placed under very strict observation.

The determination to supply no facts from memory, is offered as some apology for so many blanks appearing in the subjoined tables. They exhibit a view of 203 cases, including all those which proved fatal. Unfortunately, there is no record of a large number of the mild cases.

No. I.—TABLE OF CASES TREATED IN THE NEW FEVER HOSPITAL.—MALES.

Name.	Age.	Date of Seizure.	Date of Relapse.	Day of Disease on which Relapsed.	No. of relapses	Result.	Date of Admission.	Date of Dismissal.	Period under Observation	Remarks.
William Wilson, . .	32	July 25	...	...	...	Cured	August 2	August 21	20 days	
Robert Baillie, . . .	71	Not known	Not known	Not known	1	„	do.	October 9	69 „	Severe case. Extreme depression, requiring a very large amount of whisky, wine, &c.
John Hay, ...	18	do.	do.	do.	1	„	August 4	August 14	11 „	
Robert Fraser, . . .	10	August 3	No relapse in hospital.	...	...	„	„ 5	„ 26	22 „	
William Davidson, .	30	„ 2	August 18	17th	1	„	„ 6	Septem. 11	37 „	
William Stewart, . .	9	Not known	Not known	Not known	3	„	„ 5	„ 14	41 „	Last relapse milder than those preceding it.
David Collison, . . .	77	August 2	August 18	17th	1	„	„ 7	October 9	64 „	In the relapse, he was nearly carried off by dysentery. Abscess on the right hip, after the relapse.
James M'Kenzie, .	50	July 31	„ 18	19th	1	„	„ 7	Septem. 12	37 „	Severe case in the first attack. Tedious convalescence from the relapse, with swelling of the legs. Got much wine and porter.
Robert Hall, ...	27	Not known	„ 4	Not known	1	„	„ 7	August 15	9 „	
Alexander Christie,	14	August 4	August 17	14th	1	„	„ 7	„ 26	20 „	Congestion of the spleen on the 6th day of the first attack; and also on the 2d of the relapse, or 15th day of the disease.
James Pugh, ...	15	„ 3	„ 15	13th	1	„	„ 7	Septem. 11	36 „	Congestion of the spleen. *Vide* p. 110.
Peter Martin, . . .	23	„ 1	Not known	Not known	3	„	„ 7	October 19	74 „	He was dismissed without any febrile symptoms, at his own request, before relapsing, and was admitted on August 30th, with severe symptoms, three days afterwards. Large parotid abscess, and extreme debility in the third relapse. Complete recovery.

Thomas Laing, . . .	22	August 3	August 18	16th	2	Cured	August 8	Not known	...	Epistaxis on the 6th day. He was dismissed upon the 18th, and readmitted on the 19th; but when he was dismissed again does not appear. His second relapse was treated in the Infirmary, by another physician.
George Ammon, . .	17	„ 5	No relapse in hospital.	...	...	„	„ 8	August 18	11 „	Dismissed by desire, on the 14th day
David Smith, ...	18	July 31	No relapse	...	...	„	„ 3	„ 31	24 „	Stupor on 11th day; eruption on 12th, which was thus recorded in the journal, "there is at present an eruption, of a dirty rose colour, covering the chest, shoulders, and back, which was observed by the nurse, two hours ago, to be of a vivid red colour. It is rather more vivid on the back, than on the chest and shoulders, which have been exposed to the air for some time."
George Johnstone, .	20	August 6	...	...	...	Died	„ 3	„ 12	5 „	*Vide* p. 29.
A. M'Kenzie, ...	27	July 31	August 16	17th	1	Cured	„ 8	„ 29	22 „	
James Pennycuick,	9	August 5	August 23	19th	1	„	„ 9	„ 29	21 „	
James Law, ...	74	„ 6	...	...	...	Died	„ 9	„ 15	6 „	See page 25.
David Collison, . . .	12	August 4	August 18	15th	1	Cured	„ 10	Septem. 16	38 „	
Felix O'Neil, . . .	52	„ 6	„ 19	14th	1	„	„ 10	„ 10	32 „	
Francis Nicolson, .	50	„ 5	„ 29	25th	1	„	„ 13	„ 16	35 „	
John Brown, ...	36	July 31	„ 16	17th	1	„	„ 13	August 28	16 „	
Andrew Stewart, . .	18	August 13	No relapse	...	...	„	„ 17	Septem. 2	17 „	Small lake-coloured spots all over the body; not like fever eruption, but seeming to depend upon extravasated blood, from their ultimate colour.
John Small, ...	25	„ 2	do.	...	...	„	„ 17	„ 6	21 „	An eruption, apparently that of fever, on the chest and back; but it was not observed till fading.
Robert Meldrum, .	35	„ 9	August 25	17th	1	„	„ 19	„ 6	19 „	

Name.	Age.	Date of Seizure.	Date of relapse.	Day of Disease on which Relapsed.	No. of Relapses	Result.	Date of Admission.	Date of Dismissal.	Period under Observation	Remarks.
E. Mains, ...	18	August 15	August 27	13th	1	Cured	August 19	Septem. 5	18 days	Alarming epistaxis, when admitted.
J. Strang, ...	30	„ 17	Not known	...	1	„	„ 21	October 10	51 „	
James O'Connor, . .	20	„ 18	August 28	11th	1	„	„ 21	Septem. 9	18 „	
A. Campbell, ...	40	Not known	...	...	...	Died	„ 25	August 26	1½ „	*Vide* page 33.
Angus Cameron, . .	13	August 24	None in hospital	...	...	Cured	„ 26	Septem. 11	17 „	
Peter Quin, ...	23	„ 23	Septem. 7	16th	1	„	„ 26	„ 16	22 „	Epistaxis on the 7th day.
K. M'Kenzie, . . .	36	„ 21	Not known	...	1	„	„ 26	October 8	44 „	
H. Perfect, ...	19	„ 22	None in hospital	...	...	„	„ 26	Septem. 8	14 „	
H. Collins, ...	30	„ 23	None in hospital	...	...	„	„ 26	„ 4	10 „	Dismissed on 13th day.
H. Coyle, ...	32	„ 24	None in hospital	...	1	„	„ 26	„ 11	17 „	Relapsed out of hospital.
A. Mill, ...	25	„ 23	None in hospital	...	...	„	„ 26	„ 25	31 „	
B. M'Peak, ...	3½	„ 23	Not known	...	1	„	„ 26	„ 20	26 „	
D. White, ...	47	„ 24	Septem. 10	18th	1	„	„ 27	„ 29	34 „	*Vide* page 55.
John Munon, ...	24	„ 24	None in hospital	...	...	„	„ 29	„ 8	11 „	Dismissed on the 16th day, by desire.
Robert Fraser, . . .	39	Not known	Not known	...	1	„	„ 30	„ 27	29 „	
John Johnstone, . .	22	admitt. during relapse	...	...	1	„	„ 31	„ 9	10 „	
John Paterson, . .	36	August 28	Septem. 8	12th	1	„	„ 31	„ 29	30 „	
James Smith, ...	33	„ 27	No relapse	...	...	„	„ 31	„ 19	20 „	Typhus, with eruption.
William Watson, . .	28	„ 31	None in hospital	...	...	„	Septem. 3	Septem. 12	10 „	Dismissed on 13th day, by desire.
D. Leverty, ...	35	„ 31	do.	...	...	„	„ 3	„ 12	10 „	Do. do.
N. Adams, ...	19	Septem. 2	Septem. 14	13th	1	„	„ 4	October 2	29 „	Vomiting of bloody matter, followed by epistaxis, on the 4th day.
J. Small, ...	52	„ 4	None	...	none	Died	„ 6	Septem. 8	3 „	Sudden death from disease of the heart.
M. Golden, ...	24	Not known	Admitted during relapse	...	1	Cured	„ 6	„ 14	9 „	
J. Aitken, ...	13	Septem. 4	Septem. 17	14th	1	„	„ 6	October 7	32 „	
Patrick Fagan, . . .	47	„ 2	„ 19	18th	1	„	„ 8	„ 8	31 days	Enlargement of the submaxillary glands, during convalescence.

S. Baird, ...	23	„ 3	None in hospital	...	...	„	„ 9	„ 2	24	„	
D. Ross, ...	33	„ 3	Septem. 17	15th	1	„	„ 9	„ 9	31	„	Enlargement of spleen, on 3d day of the relapse, dark abdominal stripe.
John Connor, ...	47	„ 7	„ 25	19th	1	„	„ 10	„ 7	28	„	
James Baxter, . . .	21	„ 9	„ 23	15th	1	„	„ 11	not recorded	...		
Archibald Hepburn,	16	Not known	Sept. 7	Not known	1	Cured	„ 11	Septem. 18	8	days	Admitted during relapse.
William Robertson,	35	Sept. 6.	„ 22	15th	1	„	„ 11	October 6	26	„	
James Kelly, ...	16	August 29	„ 12	15th	1	„	„ 12	Septem. 22	11	„	
Henry Robertson, .	34	Sept. 9	„ 25	17th	1	„	„ 12	October 7	26	„	
Alex. Robertson, .	5	„ 9	„ 20	12th	1	„	„ 12	„ 7	26	„	
William Robinson, .	35	„ 19	„ 23	15th	1	„	„ 12	„ 9	28	„	*Vide* page 51.
David Wright, . . .	34	„ 10	„ 25	16th	1	„	„ 12	„ 9	28	„	
Thomas M'Cabe, . .	23	„ 9	„ 22	14th	1	„	„ 13	„ 5	23	„	
James Russel, . . .	52	„ 10	None	None	...	Died	„ 13	Septem. 15	3	„	Was only a day and a half in the hospital. He died unexpectedly; and was not seen by Dr Cormack.
John M'Lean, . . .	19	„ 11	Sept. 24	14th	1	Cured	„ 13	October 7	25	„	
William Dallas, . .	22	Not known	Not known	...	1	„	„ 14	„ 5	32	„	Became yellow in the relapse, and had epistaxis, delirium, and the other symptoms with severity.
M. O'Neil, ...	15	Sept. 11	Sept. 27	17th	1	„	„ 14	„ 6	23	„	
Thomas Thompson,	23	„ 10	„ 25	16th	1	„	„ 16	„ 9	24	„	
James Wood, . . .	23	„ 12	Not known	Not known	1	„	„ 19	„ 9	21	„	Boil over right trochanter during convalescence.
John M'Donald, . .	7	„ 16	Oct. 2	17th	1	„	„ 19	„ 9	21	„	
James Rutherford,	16	„ 14	Sept. 28	15th	1	„	„ 19	„ 13	25	„	Tonsillitis.
John Ritson, ...	19	„ 17	„ 30	14th	1	„	„ 20	„ 9	20	„	*Vide* page 152.
Dr Heude, ...	23	„ 21	None	15th	...	„	„ 21	„ 21	32	„	*Vide* page 112.
John Mullans, . . .	32	„ 21	Oct. 5	...	1	„	„ 22	„ 24	33	„	*Vide* page 70.
Robert Watson, . .	47	„ 22	None in hospital	...	...	„	„ 25	„ 19	25	„	
John M'Gill, ...	26	„ 23	Oct. 7	15th	1	„	„ 25	„ 31	37	„	Epistaxis, and slight yellowness in the relapse.
J. Jameson, ...	12	„ 24	„ 6	13th	1	„	„ 29	„ 23	25	„	
John Cowie, ...	43	„ 23	„ 6	14th	1	„	„ 29	Novem. 20	53	„	Very severe periodic rheumatic pains in the relapse.

Name.	Age.	Date of Seizure.	Date of Relapse.	Day of Disease on which Relapsed.	No. of relapses	Result.	Date of Admission.	Date of Dismissal.	Period under Observation	Remarks.
William Brunton, .	32	Sept. 27	None	...	...	Died	October 1	October 9	9 „	*Vide* page 39.
David Dickson, . .	23	„ 30	Oct. 12	13th	1	Cured	„ 5	„ 24	20 „	
Colin M'Kay, ...	22	Oct. 2	None in hospital	...	...	„	„ 6	„ 16	11 „	Dismissed by desire on the 15th day. Profuse epistaxis on 9th day.
Samuel Smith, . . .	35	„ 30	Oct. 13	14th	1	„	„ 6	„	...	
M. Dowlands, . . .	42	„ 26	None	...	...	Died	„ 7	„ 18	12 „	*Vide* page 49.
D. Matheson, ...	57	„ 29	...	...	...	„	„ 7	„ 17	11 „	*Vide* page 42.
Daniel M'Farlane, .	12	admitt. during relapse.	...	Not known	1	Cured	„ 9	„ 15	7 „	
John Conway, . . .	60	Oct. 25	Oct. 9	15th	1	„	„ 9	Novem. 10	33 „	*Vide* page 81.
Peter Conway, . . .	16	„ 6	„ 20	15th	1	„	„ 9	October 26	18 „	
William Dodds, . .	20	„ 4	„ 17	14th	1	„	„ 9	Novem. 13	41 „	*Vide* page 65.
Robert M'Ghee, . .	18	Sept. 30	„ 20	21st	1	„	„ 9	...	...	
Fr. Douglas, ...	16	Oct. 9	Not known	Not known	1	„	„ 10	Novem. 21	44 „	
Hugh Cunningham,	22	„ 5	None in hospital	...	...	„	„ 11	„ 4	25 „	
E. Stevenson, . . .	14	Not known	Not known	...	1	„	„ 11	...	...	Enlargement of the superficial inguinal glands of the left side, during convalescence from the relapse.
James Bird, ...	48	Oct. 6	1st on Oct. 23	18th	4	Died	„ 13	20	39	
Samuel Allan, . . .	29	„ 8	Oct. 23	16th	1	Cured	„ 14	...	...	
James M'Guire, . .	20	„ 14	„ 26	13th	1	„	„ 18	...	...	

No. II.—TABLE OF CASES REPORTED IN THE NEW FEVER HOSPITAL.—FEMALES.

Name.	Age.	Date of Seizure.	Date of Relapse.	Day of Disease on which Relapsed.	No. of relapses	Result.	Date of Admission.	Date of Dismissal.	Period under Observation	Remarks.
E. Fairns, ...	45	July 27	None in hospital	...	...	Cured	August 2	August 17	16 days	Great vascularity of the conjunctiva during the fever.
Js. Connor, ...	50	Aug. 1	August 16	16th	1	„	„ 2	Septem. 9	39 „	
Janet Bailie, ...	70	Not known	Not known	15 ?	1	„	„ 2	October 9	60 „	*Vide* page 81.
S. Cormack, ...	50	July 30	None in hospital	...	...	„	„ 5	August 14	10 „	Dismissed on 15th day, about the usual date of the relapse.
El. M'Peak, ...	40	„ 31	August 13	14th	1	„	„ 6	Septem. 20	46 „	Aborted on 15th day, being the 2d of the relapse.
Cath. Munro, . . .	14	„ 31	„ 14	15th	1	„	„ 5	not recorded	...	
Mary Tain, ...	31	„ 29	„ 23	26th	1	„	„ 5	Septem. 9	36 „	
J. M'Lure, ...	43	„ 26	No relapse ascertained.	...	...	„	„ 5	„ 6	33 „	
J. M'Gregor, ...	48	Aug. 2	August 16	15th	1	„	„ 6	„ 19	45 „	Yellowness of conjunctiva on 10th day, but no bad symptoms along with it.
Js. Gardiner, ...	15	„ 3	„ 19	17th	1	„	„ 7	„ 4	29 „	
E. M'Peak, ...	18	„ 6	„ 21	16th	2	„	„ 7	„ 9	34 „	A previous attack was treated in Ward No. 17 of the Royal Infirmary, before admission into the New Fever Hospital.
M. Stafford, ...	38	admitt. during relapse.	...	...	1	„	„ 8	August 21	14 „	
E. Morrison, ...	24	Aug. 5	Not known	Not known	1	„	„ 8	„ 9	33 „	Tonsillitis in the relapse.
M. Smith, ...	7	„ 4	...	...	...	„	„ 8	„ 23	16 „	No distinctly-formed relapse; but two attacks of heat of skin, followed by copious sweating each time, between the date of admission and dismissal.
Mary Kemp, ...	44	„ 4	August 17	14th	1	„	, 9	„ 9	32 „	

Name.	Age.	Date of Seizure.	Date of Relapse.	Day of Disease on which Relapsed.	No. of Relapses	Result.	Date of Admission.	Date of Dismissal.	Period under Observation	Remarks.
El. Wilkinson, . . .	17	August 2	August 17	16th	1	Cured	August 9	Septem. 4	27 days	Delirium, with a tendency to coma in the first attack; also profuse epistaxis.—Effusion into the wrist and knee-joints during convalescence from the relapse.
J. Finney, ...	36	„ 6	„ 19	14th	1	„	„ 10	„ 13	35 „	Tedious and severe relapse.—Great pain in the feet during recovery.
A. Crosby, ...	36	„ 5	„ 15	11th	1	„	„ 10	August 22	13 „	
C. Brown, ...	15	„ 6	„ 21	16th	1	„	„ 10	Septem. 4	26 „	
C. Alexander, . . .	19	„ 7	„ 18	12th	1	„	„ 11	August 29	19 „	Epistaxis on 2d and 7th day.
P. Cochrane, ...	39	admitt. during relapse.	...	...	1	„	„ 13	„ 22	10 „	On admission there were the remains of yellowness, which, it was ascertained, had appeared on the 3d day of the attack.
A. Campion, ...	16	Aug. 10	„ 23	14th	1	„	„ 15	Septem. 11	28 „	
A. Penman, ...	18	„ 14	„ 27	14th	1	„	„ 18	„ 11	25 „	
A. Thomson, ...	36	„ 19	Not known	...	1	„	„ 20	„ 20	32 „	
E. M'Gra, ...	10	„ 20	do.	...	1	„	„ 21	„ 25	36 „	
Js. Thomson, ...	33	„ 16	None in hospital	...	...	„	„ 22	„ 20	30 „	
M. Mullans, ...	35	„ 17	August 31	15th	1	„	„ 22	„ 29	8 „	Relapsed out of hospital.
E. Turnbull, ...	36	„ 18	Not known	...	1	„	„ 23	October 6	45 „	
S. Duffy, ...	24	„ 17	None in hospital	...	...	„	„ 24	Septem. 1	8 „	Dismissed on 16th day.
R. Cuthbertson, . .	60	Not known	...	...	...	Died	„ 25	August 28	3½ „	Great typhoid depression.—Died.—No sectio.
M. Sutherland, . . .	26	Aug. 22	...	...	1	Cured	„ 25	Septem. 20	27 „	
P. Forrest, ...	20	„ 17	August 31	15th	1	„	„ 26	„ 16	22 „	
E. Flockhart, . . .	30	„ 25	Septem. 8	15th	1	„	„ 26	October 5	41 „	Pain and swelling of the wrist and ankle-joints during convalescence from the relapse.
E. M'Millan, ...	18	„ 21	„ 29	40th	1	„	„ 26	„ 25	61 „	This girl was under observation till her second attack in the hospital on the 40th day. During the second attack she had much hysterical dyspnœa.

Jane Thomson, . .	20	„ 27	„ 7	12th	1	„	„ 30	Septem. 16	18	„	
Jane M'Lachlan, . .	23	„ 23	No relapse in hospital	...	...	„	„ 30	„ 11	13	„	Dismissed on 20th day.
M. Kirkwood, . . .	15	„ 28	Not known	Not known	1	„	„ 31	October 4	35	„	Affection of the cornea, during convalescence from the relapse.
Rose Fraser, ...	30	„ 30	Septem. 14	16th	1	„	Septem. 1	Septem. 30	30	„	
C. M'Gra, ...	13	Not known	Not known	...	1	„	„ 1	„ 25	25	„	Aborted on 9th day.
Mary Fraser, . . .	33	August 24	None in hospital	...	...	„	„ 2	„ 19	18	„	
Janet Fortune, . . .	21	Not known	Septem. 7	Uncertain	1	...	„ 2	„ 23	22	„	She was dismissed on the 6th, at her own urgent request; and was re-admitted, in the relapse, on the 9th.
Mrs Livingstone, . .	32	August 30	None	...	...	Died	„ 2	„ 4	2½	„	Died on 6th day. She was delivered on the 29th August of a child, at the full time. She was seized on th 30th with cough and dyspnœa; petechiæ were observed on the body, and a black matter issued from the mouth and nostrils. On the 31st, she became yellow. The cough, dyspnœa, petechiæ, and yellowness, existed on admission. She died asphyxiated, owing to the accumulation of secretion in the bronchial tubes. No section was obtained. This case was not seen by Dr Cormack, it having occurred during his absence from town for a few days.
M. Ralston, ...	29	„ 30	Not known	...	1	Cured	„ 4	„ 30	27	„	
E. Bannerman, . . .	14	„ 23	Septem. 6	15th	1	„	„ 6	„ 15	10	„	
C. Aitken, ...	31	Septem. 3	„ 24	22d	1	„	„ 6	October 5	30	„	
C. Dunn, ...	28	Not known	„ 5	Not known	1	„	„ 6	Septem. 30	25	„	
E. Cleghorn, ...	52	Septem. 2	...	...	...	„	„ 6	October 12	37	„	She required a large amount of stimulants.
E. M'Intosh, ...	25	„ 3	„ 18	16th	1	„	„ 7	„ 6	30	„	
M. Durie, ...	20	„ 2	„ 14	13th	1	„	„ 7	Septem. 27	21	„	

Name.	Age.	Date of Seizure.	Day of Relapse.	Day of Disease on which Relapsed.	No. of Relapses.	Result.	Date of Admission.	Date of Dismissal.	Period under Observation	Remarks.
M. Mullans, ...	14	Septem. 4	Septem. 29	26th	2	Cured	Septem. 7	October 12	36 days	Was dismissed by desire on the 16th September, and readmitted October 1, in a second attack. She had a third attack in the beginning of November, treated by Dr Alison.
M. Armstrong, . . .	40	August 31	„ 15	16th	1	„	„ 7	„ 6	30 „	
J. Stewart, ...	19	Septem. 6	„ 19	14th	1	„	„ 9	„ 4	26 „	
L. Gartlan, ...	22	„ 7	„ 20	14th	1	„	„ 9	„ 4	26 „	*Vide* page 19.
C. Ballantyne, . . .	22	„ 5	„ 20	16th	1	„	„ 9	Septem. 29	21 „	
J. Kerr, ...	22	„ 6	„ 18	13th	1	„	„ 9	October 5	27 „	
M. Donald, ...	19	„ 5	„ 17	13th	1	„	„ 11	Septem. 26	16 „	
S. Marshall, ...	24	„ 6	„ 20	15th	1	„	„ 11	„ 26	16 „	
E. Keir, ...	21	„ 6	„ 19	14th	1	„	„ 11	October 4	24 „	
J. Fraser, ...	27	„ 8	„ 20	13th	1	„	„ 11	„ 8	28 „	
E. Mason, ...	19	Not known	„ 22	Not known	1	„	„ 11	„ 6	26 „	
E. Coghill, ...	18	do.	None	None	...	Died	„ 12	Septem. 17	5 „	Continued fever, complicated with pneumonia. No section was obtained.
S. M'Peak, ...	16	Septem. 12	Septem. 27	16th	1	„	„ 15	October 4	20 „	
J. Grahame, ...	16	„ 7	„ 23	17th	1	„	„ 15	„ 8	24 „	This girl had amenorrhœa during the previous four months. During the relapse, she had severe hysterical symptoms. Dark abdominal stripe from ensiform cartilage to pubes, which appeared in both attacks, and almost entirely disappeared in the intermission.
B. Matheson, ...	30	„ 17	Oct. 12th & 25th	26th & 39th	2	„	„ 17	Novem. 21	66 „	
M. Windon, ...	16	„ 16	Septem. 27	12th	1	„	„ 18	October 9	22 „	
A. Shaw, ...	19	„ 16	„ 30	15th	1	„	„ 18	„ 20	33 „	Dysentery, aud along with it appeared a dark abdominal stripe.
J. Pirrie, ...	40	„ 13	„ 27	15th	1	„	„ 18	„ 12	25 „	
S. Hamilton, ...	16	„ 15	„ 28	14th	1	„	„ 19	„ 6	18 „	

M. Dempster, . . .	28	„ 15	Not known	...	1	„	„ 19	„ 20	32	„	
M. Paterson, ...	33	„ 16	„ 29	14th	1	„	„ 19	„ 26	38	„	
F. M'Kenzie, ...	25	„ 18	„ 28	11th	1	„	„ 20	„ 14	25	„	
J. Bishop, ...	33	„ 3	„ 17	15th	1	„	„ 21	„ 9	19	„	
C. Turner, ...	14	„ 17	October 6	20th	1	„	„ 21	„ 20	30	„	
Is. Morris, ...	45	„ 16	„ 1	16th	1	„	„ 21	„ 8	18	„	*Vide* page 46.
E. Menzies, ...	34	„ 20	„ 5	16th	1	Cured	„ 21	„ 31	41	„	Dark abominal line: menstruation.
M. M'Kenzie, . . .	42	„ 21	„ 7	17th	1	„	„ 22	„ 30	39	„	
H. M'Indoe, ...	50	„ 21	„ 5	16th	1	„	„ 25	„ 16	22	„	
E. Scott, ...	30	„ 25	„ 7	13th	1	„	„ 25	„ 25	31	„	Considerable yellowness on 6th day.
J. Borthwick, . . .	12	„ 24	„ 9	16th	1	„	„ 26	„ 16	21	„	
E. Herd, ...	28	Septem. 19	October 5	17th	2	Cured	Septem. 26	„ 21	26	days	
M. M'Kay, ...	55	Not known	One on Nov. 12	...	1	„	„ 27	Novem. 25	60	„	Sloughing of pudenda.
C. Goodsir, ...	15	Septem. 24	Novem. 6	13th	1	„	„ 28	October 26	29	„	
M. M'Intyre, ...	28	„ 19	None	...	...	„	„ 28	„ 25	28	„	Typhoid; no eruption; continued fever.
E. Geddes, ...	37	„ 29	Oct. 14, & Nov. 3	16th & 36th	2	„	„ 29	Novem. 21	55	„	
Is. Cox, ...	27	„ 23	October 8	16th	1	„	„ 29	„ 23	57	„	*Vide* page 76.
A. Wilkie, ...	46	„ 25	„ 7	13th	1	„	„ 30	„ 2	34	„	*Vide* page 68.
H. Rose, , ...	26	„ 26	„ 11	16th	1	„	„ 30	October 21	26	„	*Vide* page 16.
H. Thomson.	21	„ 29	„ 14	16th	1	„	October 1	„ 25	25	„	
M. Wallace.	36	„ 28	„ 16	19th	1	„	„ 1	Novem. 4	38	„	*Vide* page 73.
M. M'Cabe, ...	22	Not known	Not known	...	1	„	„ 3	„ 9	36	„	
Mrs Allan, ...	42	Septem. 17	Septem. 27	11th	1	„	„ 3	„ 9	38	„	Hysterical symptoms in the relapse.
M. Muirhead, . . .	44	October 3	October 14	12th	1	„	„ 3	„ 7	36	„	
Mrs Ross, ...	20	„ 1	„ 13	13th	1	„	„ 4	October 22	19	„	
Mary Ross, ...	32	Septem. 30	„ 14	15th	1	„	„ 4	„ 23	19	„	
Mrs Tabor, ...	28	October 1	„ 13	13th	1	„	„ 5	Novem. 20	47	„	Profuse menstruation.
H. Rennie, ...	42	„ 1	Not known	...	1	„	„ 6	„ 21	47	„	
J. Merrilees, ...	39	Septem. 26	None	...	1	Died	„ 6	October 9	3½	„	*Vide* page 37.
M. Kerr, ...	13	October 2	Not known	...	1	Cured	„ 6	„ 26	21	„	
Mrs M'Intosh, . . .	61	„ 1	October 19	19th	1	„	„ 7	Decem. 10	65	„	*Vide* page 79.
A. Young, ...	21	Septem. 23	„ 10	18th	1	„	„ 8	October 14	7	„	

Name.	Age.	Date of Seizure.	Day of Relapse.	Day of Disease on which Relapsed.	No. of Relapses	Result.	Date of Admission.	Date of Dismissal.	Period under Observation	Remarks.
H. Gray, ...	34	October 6	None in hospital	...	...	Cured	October 9	October 13	5 days	Dismissed, by desire, on 8th day. In this case, the ordinary symptoms of the epidemic fever existed in a very mild form, with the exception of headach, which was not felt at all.
M. Burns, ...	56	„ 4	Not known	...	1	„	„ 9	...	...	
Mary M'Cabe, . . .	22	„ 8	October 22	15th	1	„	„ 9	Novem. 7	30 „	
M. Strawbridge, . .	18	Septem. 23	„ 4	12th	1	„	„ 10	October 25	16 „	
Mrs Stupart, ...	40	„ 23	Admitted during relapse.	...	1	„	„ 10	Novem. 21	43 „	
J. Stupart, ...	12	„ 23	do.	...	1	„	„ 10	„ 21	43 „	
Mrs Shee, ...	29	October 4	October 20	17th	1	„	„ 10	„ 8	29 „	

MEMOARNDA.

In April 1843, there were in the Infirmary, . 96 Fever patients.
„ May, „ „ . . 133 „
„ June, „ „ . . 161 „
„ July, „ „ . 206 „
(In July 1842, „ . . 55) „

The Janitor's house was first opened, to accommodate more patients. Next the New Fever Hospital was opened in the beginning of August, with 60—soon afterwards increased to 86—beds.

On August 14th, the Infirmary, &c., contained . 280 Fever patients.
„ 28th, . . . 306 „

The Lock Fever Hospital was opened on September 1st, with 35 beds.

On September 11th, there were, altogether, . 371 Fever patients.

Next the Male Shed was opened with 26 beds; and on the 20th September, the Chapel and Servants' rooms were fitted up with 20 beds.

On September 25th, the number was . . 469 Fever patients.

The Female Shed was opened on October, 9th, with 55 beds.

On October 11th, there were, . . . 482 „
„ November 6th, ... 501 „

Number of Fever Patients during the last Six Weeks in all the Fever Wards.

„ 13,	467
„ 20,	478
„ 27,	465
December 4,	471
„ 11,	451
„ 18,	470

THE END.

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